Cork and Insulation

United Cork Companies New York

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CORK *and* INSULATION

Facts and Figures

Compiled by

UNITED CORK COMPANIES

of NEW YORK

Main Office and Factory
LYNDHURST, N. J.

Selling Offices

NEW YORK
50 Church St.
Terminal Bldg.

CHICAGO
110 So. Dearborn St.
Westminster Bldg.

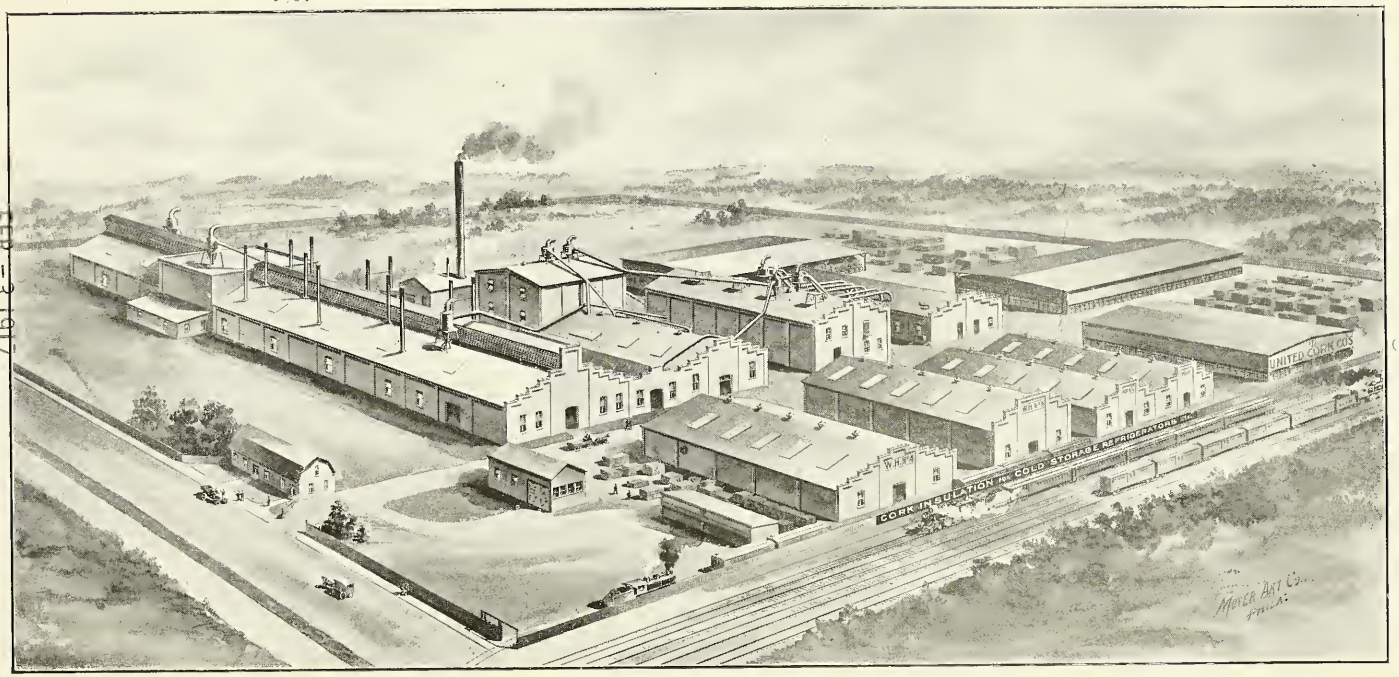
PHILADELPHIA
Broad and Chestnut Sts.
Land Title Bldg.

CLEVELAND
818 Euclid Ave.
Citizens Bldg.

BOSTON
88 Broad St.

ATLANTA
Broad, Walton and
Forsyth Sts. (Grant Bldg.)

UNITED CORK COMPANIES

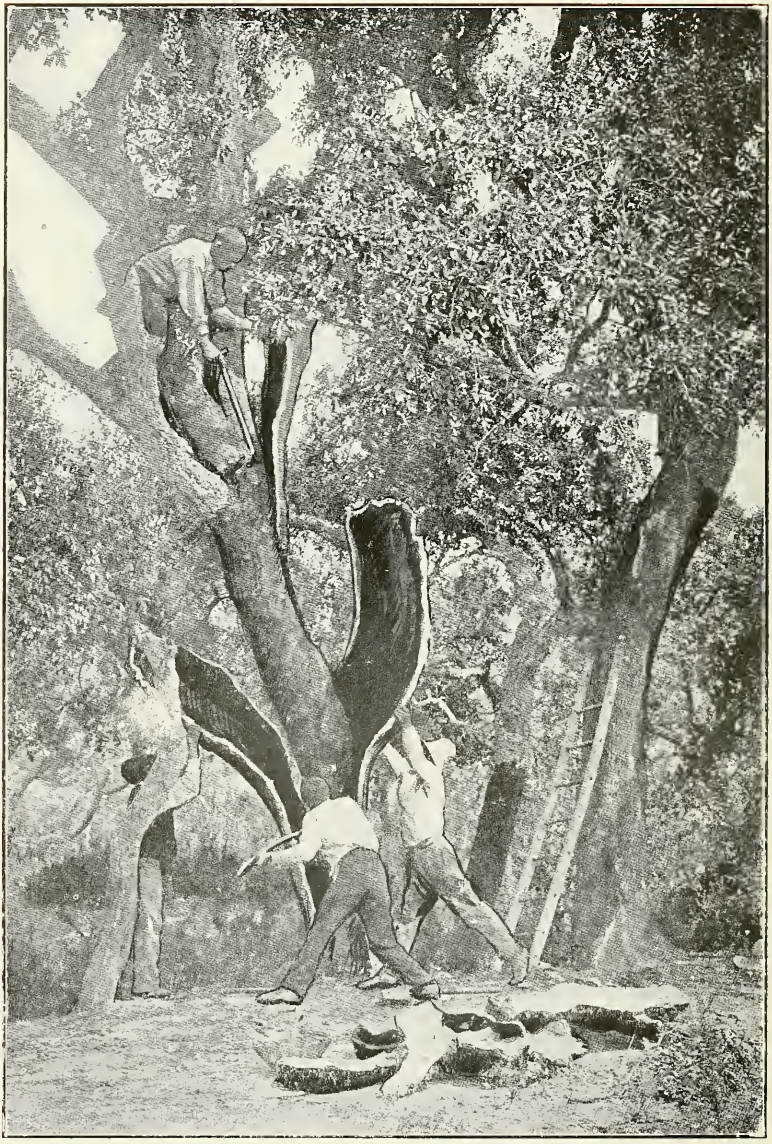


PLANT OF UNITED CORK COMPANIES, LYNDHURST, N. J.
Covering 9 Acres of Ground. Daily Capacity, 80,000 Feet B. M. of Corkboard.
Situated on Main Line D. L. & W. R. R.

General Information

PART I

(Pages 1 to 38 inclusive)



Stripping Cork Trees in Portugal

CORK AND INSULATION

MODERN economic and commercial conditions could not have developed, nor could they continue to exist, without the aid of **refrigeration.** Upon this science many important industries have been built up, among which ice making and cold storage take first rank.

The desirability of being able to preserve and set aside products of the season of plenty, to be made use of during the non-productive seasons, was early recognized; witness the many crude methods adopted by individuals, farmers particularly, to keep over from one season to another their fruits, vegetables, dairy and other products. These efforts go back as far as history itself.

When during the latter half of the last century, induced by the development of industrial and transportation facilities, people flowed more and more to centers of population forming cities, empires in themselves, this desirability became an indispensable necessity. Refrigeration and the industries making use of it supplied the need.

What we are endeavoring to show in this booklet, is how to make use of Refrigeration in the most efficient and economic way, i. e., to keep the cold in and the heat out of rooms or buildings after the refrigeration has been turned on.

Here is where **Cork Insulation** enters the field.

When we first undertook its manufacture, "Cork Insulation" was a luxury; its principle little known; its possibilities unsounded and its employment rare.

We take pride in the part we have played in making cork insulation a standard of good commercial practice.

From a little plant, we have become through successive increases, a large one. Small facilities have become greater ones; a few thousand square feet have grown into acres of factory space.

We therefore feel well fitted for the task of explaining in the most practical manner such details of Cork Insulation and its underlying principles as will be of most value to those interested—Architects, Engineers or Owners of plants.

Heat

Heat is the substance, if we may call it such, around which are centered all efforts of the designer of refrigeration as well as the erector of insulation; to remove heat is the sole object of the former; to keep it away—"To Insulate"—the object of the latter; both working to the same end it will readily be recognized that the work of either is of at least equal importance. Whatever amount of heat is kept from entering a room by insulating it will not have to be removed by the refrigerating machinery. Thus the work accomplished by the former means work "saved" for the latter.

The rather common statement that cold is the absence of heat, and heat the absence of cold, is an unscientific but more or less expressive principle.

At least it raises the question why we figure cold as a negative fact. The answer is simply that the sun is an active source of general heat, and heat therefore an active principle, while cold is nothing more than a word to explain the absence of heat.

Heat Measurements

Heat permeates everything.

Its intensity is registered by bodily sensation — "feeling". In this manner we recognize that one body holds more heat than another.

Thermometers register the physically discernible temperature of different bodies; the **actual** amount or quantity of heat, however, is measured by the British Thermal Unit (B. T. U.) which means the amount of heat required to raise the temperature of one pound of water, one degree Fahrenheit (from 38° to 39° F.).

SPECIFIC HEAT is the amount of heat required to raise the temperature of 1 lb. of water 1° F. as compared with the amount of heat required to raise 1 lb. of any other substance 1° F. The same amount of heat required to raise the temperature of 1 lb. of water 1° F. will raise the temperature of 1 lb. of brick 5° F., hence the specific heat of brick is one-fifth or .2.

The term LATENT HEAT means the amount of heat required to change the state of bodies—yet not registerable by thermometers. For instance, in order to melt 1 lb. of ice, 144 B. T. U.'s must be supplied by or abstracted from the surroundings, but the temperature of the resulting water remains at 32° F. until all the ice is melted. After that the rise in temperature takes place. It follows that 144 B. T. U.'s is the cooling effect obtained in the melting of 1 lb. of ice at 32° F.

In this country the capacity of refrigerating apparatus is expressed

in Tons of Refrigeration. One ton of Refrigeration therefore represents the cooling effect produced by melting one ton (2000 lbs.) of ice at 32° F. into water at 32° F. or 2000×144 B. T. U.'s=288,000 B. T. U.'s.

Heat Transference

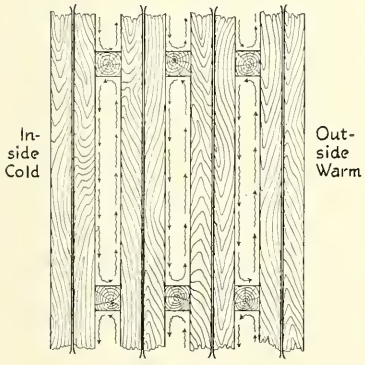
Heat makes itself felt or rather it is transferred in three different ways: —by radiation. —by conduction. —by convection.

RADIATION is the transfer of heat through space without perceptibly affecting the medium through which it passes. For example: radiated heat is the heat we get from the sun; heat that is given out from a hot stove or steam radiator.

CONDUCTION is the transmission of heat from molecule to molecule, and thus conducted from one part of a substance to another.

Some substances conduct heat more readily than others. Metals for instance conduct heat rapidly. Glass and stone furnish greater resistance. Wood is a rather poor conductor of heat, and gases at the low end of scale conduct but little heat. An absolute vacuum would transmit no heat whatever.

We have an example of conducted heat when we place the end of a steel bar into the fire and the other end becomes warmer and warmer as the heat is conducted through it.



This diagram illustrates the direction of air currents in transmission of heat by Convection.

CONVECTION is a process by which heat is conveyed as a result of the circulation of fluids—either gases or liquids —set up through contact with hot or cold surfaces.

For example: Take the air confined in a chamber with walls of different temperatures. The air next to the cold wall will be cooled, become heavy and fall. Its place will be taken by the air heated through contact with the warm wall. This air in turn will become cooled and drop. In this manner circulation is automatically induced.

Reduction of size of air chambers will of course reduce circulation and the consequent transference of heat.

Ideal Insulation

Evidently from the foregoing an ideal insulator will be one composed as much as possible of a gas, air for instance, restrained from circulating by imprisonment in minute chambers.

These principles of insulation have been well known for many years, but not until recently have they been incorporated into insulating devices to the fullest extent.

Methods of Insulation

The basis of all insulation is AIR. Even the old and inefficient methods were based upon the recognition of this fact.

Founded upon this basis the first commercially employed method of insulation was the so-called **Air-space Construction.**

This is formed by two or more walls of brick or boards and paper. The great inefficiency of this lies in the fact that when the outside wall is warm and the inside cold, the air in the space next to the warm side becomes heated and rises, while that next to the cold side cools and falls. Circulation results, and convection induces and accelerates the transmission of heat.

Another objection where boards and paper are used is that open joints and cracks invariably follow the shrinkage of wood, and all wood will shrink. Through these cracks air will enter, bringing with it the greatest enemy of insulation—moisture, i. e., water.

Water being a prime conductor of heat detroys the insulating value of all insulation.

In wood construction this moisture also causes decay and where filling is used, the filling likewise deteriorates.

Air spaces are furthermore an active danger in case of fire. They are literal vent shafts that nourish fire for days, and are very difficult to reach with a hose. Fire underwriters do not overlook these facts in fixing insurance rates.

Whether empty or filled these air spaces are invariably infested with rats, mice and other vermin.

The next development of erecting insulation was the use of fillers which in truth is merely an effort to reduce the size of the air spaces and more nearly approach the ideal of basic insulation.

Into the empty spaces were shaken or tamped ashes, cinders,

tanner's bark, hay, straw, hair, peat, charcoal, wool, saw-dust, shavings and other suitable substances. These materials were depended upon to retard the circulation of air. Actually however, when packed tightly they displace so large a portion of the air to which the materials owe their insulating value that they are rendered inefficient; when packed loosely, they settle and leave empty spaces.

To improve these old methods by waterproofing is very expensive, and the outlay would have a much greater value if spent on an insulation waterproof of itself.

As applied to these old methods, waterproofing cannot prevent dampness from penetrating the insulating materials—gradually permeating and even saturating them.

To improve a bad method the use of mineral wool fibres and similar materials in blocks, or shapes was introduced.

While this is a little better than empty or filled spaces—it still has the overpowering disadvantage of absorbing water through capillary attraction. This is a physical phenomenon that takes place in all fibrous or porous substances. A good demonstration of this will be seen if you will dip the corner of a handkerchief in water and then watch the water spread all through the fabric.

Water the Enemy of Insulation

The effect of water on these blocks of fibrous materials is disastrous. They lose what little structural strength they have; deteriorate and decompose into a water-soaked mass that is worse than worthless as an insulator; thus become conductors instead of retarders of heat.

Lastly, but not leastly, all the foregoing methods of insulation have the serious disadvantage that they do not in themselves prevent the entrance of water and its absorption by the materials used.

Water is the arch enemy of all insulation. If water could be kept away from the insulating materials, an effective installation would be a simple matter. But water in form of vapor—i. e. moisture—is a constant condition of our atmosphere. It will enter anywhere through the medium of air.

Air absorbs moisture.

The higher the temperature of the air the greater its capacity of retaining moisture.

A difference in temperature means a difference in pressure. Nature strives to equalize this condition.

Cold air is heavier than warm air. When the door of a cold room is opened the heavy cold air seeks egress through the lower part of the

opening while the warm air rushes in through the upper part. The warm air comes in contact with the cold surfaces and immediately loses some of its capacity for holding moisture. Condensation results; moisture is deposited on the surfaces—and the insulation exposed to its disastrous effects.

The only conclusion to be drawn from the foregoing statements of accepted fact and knowledge is that a perfect insulating material must embody two distinct features:

First—It must incorporate the greatest amount of still air in the most minute chambers.

Second—It must itself be proof against the intrusion of water by absorption.

There is only one known substance that fulfills these requirements with absolute practical completeness.

This Material is CORK.

What Is Cork?

Cork is the outer layer of the bark of an evergreen species of Oak. It is indigenous to Southern Europe, the North African Coast generally, but principally cultivated in Portugal, Spain and Algeria. The trees reach a height of 30 feet and more.

By annual additions from within, this outer layer of the Cork Oak gradually becomes a soft, thick, homogeneous mass possessing the compressibility and elasticity upon which depend the economic value of the material.

When the trees are fifteen or twenty years old the first stripping of the outer bark takes place. The yield at this time—of rough, unequal and woody texture—is called Virgin Cork. It is useful for rustic ornamentation work in ferneries, conservatories, etc.

Subsequently the bark is removed at intervals of eight or ten years; the quality of the cork improves with each subsequent stripping; the trees live and thrive under this operation for a hundred years and more.

The trees are stripped usually during the months of July and August. Two cuts are made around the trunk, one a little above the ground and the other immediately under the low branches. Between these cuts three or four longitudinal incisions are made; the utmost care being taken not to injure the under bark. The cork is then removed in sections by the wedge-shaped handle of the implement used in making the incisions.

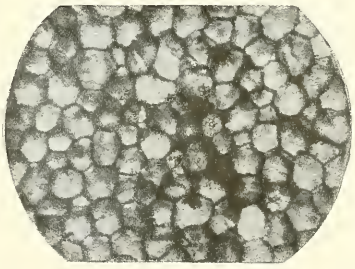
The strips are collected into big piles which are left to season for several weeks. They are then placed into large water vats or steamed to soften the outer woody coating, called bark. The application "belly" is given the inner side next to the tree.

Now follows the operation of scraping off the hard bark and flattening the sheets. After being sorted into many grades of different qualities and thicknesses the sheets are compressed into bales of about 150 lbs. each, ready for shipment.

Uses of Cork

The uses of cork are many and diversified. Its compressibility and elasticity, specific gravity and imperviousness to air and water fit it for many purposes and uses for which it has no satisfactory substitute. Among these—Cork Insulation takes first rank.

Cork was intended by nature to be an insulator. While still on the tree it prevents the scorching sun and the parching tropical winds of the country of its origin from drying up the tree's life-giving sap.



Natural Cork Magnified 120 Diameters

Under the microscope is revealed its peculiar structure which gives cork its unequalled natural supremacy as an insulator. As shown on the illustration there may be seen a numberless mass or air cells. These are spherical in shape showing no spaces between the cells and with such slight inter-cellular material that it would be impossible to crowd more air cells into an equal space. On account of this structural character, cork has no capillarity.

It is impermeable to water and air: its crowning advantage as an insulator.

Cork Waste

The cork used by the manufacturers of insulating materials is called cork shavings or waste. This material is a by-product of cork factories. It consists of trimmings of the cork bark as it is being prepared for packing; pieces too small for the manufacture of solid cork articles; strips out of which cork stoppers have been cut and shavings obtained in the tapering of cork stoppers.

It will be of interest to know that this so-called waste or shavings represents more than sixty per cent of the raw material—cork bark—used by the manufacturers of solid cork articles. These shavings are collected from hundreds of factories all over Europe and America, compressed into bales and shipped to cork insulation or linoleum plants.

The principal countries of export are Portugal, Spain, France and Algeria. The United States imports annually about 50,000 tons of cork shavings, used mostly in the manufacture of cork insulation and linoleum.

Collecting Cork Waste in Cork Factory in New York City

Our Products

At our plant at Lyndhurst, N. J., we manufacture the following products:

GRANULATED, NATURAL CORK in all sizes of granulation.

REGRANULATED CORK obtained from corkboard trimmings.

STAR CORKBOARD (WATERPROOFED) 94% **pure natural** cork and 6% **odorless waterproof** binder. No regranulated cork is used in this board.

CRESCENT CORKBOARD, baked pure natural cork, no foreign binder is used in this board.

ECONOMY CORKBOARD, made from screened regranulated cork —with same waterproof binder as is used for STAR.

CORK TILE FLOORING, made without foreign binder from the finest grade of selected cork shavings as obtained in the manufacture of tapered bottle corks.

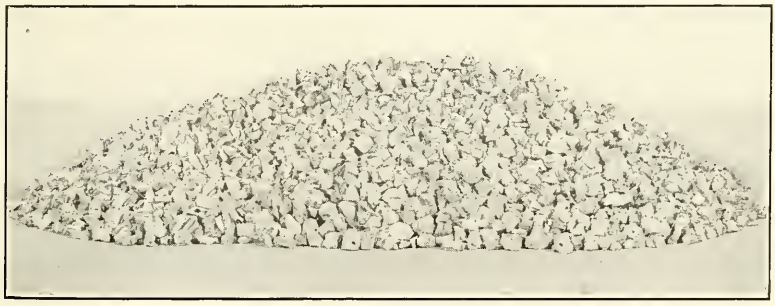
CORK BRICK, mixture of fine granulated natural cork with a special asphaltic binder.

Also in the course of completion CORK PIPE COVERING.

Granulated Cork

The first commercial article for insulation purposes obtained from cork shavings is Granulated Cork. The shavings or waste is passed through suitable grinding mills, adjusted so that the largest pieces will not exceed ⅝", ½", ¼", or even smaller sizes.

These grades can be furnished screened, i. e., freed from dust, or unscreened—⅝" unscreened is the customary grade used for insulation purposes and unless otherwise specified is always supplied.



A Pile of Granulated Cork

For years a great deal of this material has been used for insulating walls, ceilings, partitions and around sides of tanks, where the use of corkboard would be impracticable.

Mixtures of sizes of granulated cork too small to be used for

Corkboards are known as C. S. Granulated Cork 8/12, 8/20, 12/20 (meaning that they are sifted through screens of eight or twelve meshes to the inch, and over screens twelve or twenty meshes to the inch). They have a very high insulating value at low cost. Their weight is somewhat heavier than that of the regular Granulated Cork.

Natural Granulated Cork is much superior to other loose fillings on account of cork's natural characteristics, such as being odorless, non-absorbent, not supporting fire, nor being subject to decay. Its heat conductivity is also lower than that of any other loose filling ordinarily used for this purpose.

Regranulated Cork

This is a by-product obtained in the manufacture of cork boards. It consists of ground saw trimmings, damaged or broken boards, etc. It provides an excellent filler where cork in solid form cannot be used. Its specific gravity is less than that of any of the grades of Natural Granulated Cork, and since it has gone through a process of baking, it is also more waterproof. Its color is a dark brown. It should be well packed to prevent settling. It is somewhat inconvenient to handle since it is dusty and soils whatever it touches, but its insulation value is slightly higher than that of Granulated Natural Cork.

The grade mostly used, is what is known as "Mixed," a mixture of fine (⅛" mesh to dust) and coarse (⅛" to ⅝") which we recommend for most purposes, as it packs well and is least apt to settle. But, the fine grade as well as the coarse grade can be furnished separately, if desired.

Cork Board

The desirability—in modern building construction—of eliminating as far as possible the use of wood and to give a hard plaster finish to walls and ceilings of insulated rooms led up to the idea of producing cork in board form.

In 1884 Dr. Carl Grunzweig of Germany invented what he called Cork Stone or Cork Brick. Its advantages were so apparent that an immediate demand sprang up throughout Europe and America.

In the United States there are now manufactured several brands of compound, impregnated, and pure corkboard.

Believing that best results could only be obtained by a careful study of the subject we have spared no time and efforts to produce the best suitable forms of corkboard for different locations and conditions.

It is self-evident that a form of corkboard manufactured with a special purpose of meeting conditions where the insulation is apt to be

exposed to continuous, excessive moisture will not answer for places where a constant dry heat has to be dealt with.

After broad research and experiment, we have developed and are now producing at our factory in Lyndhurst, N. J., three forms of corkboard which are most suitable for these varying conditions—viz. "Star" and "Economy" Corkboards, both waterproofed, and " Crescent" Corkboard, pure cork.

Star (Waterproof) Corkboard

This product has a number of advantages over pure corkboard. It is permanently waterproof.

The immunity of Star Corkboard against any ordinary dampness places it in a class by itself, for such purposes as insulating wet floors, damp walls, bottoms of tanks, cooling apparati, underground work and many other conditions under which pure corkboard could not reasonably be expected to maintain its efficiency.

Star Corkboard is unusually solid and strong—very little inferior in this respect to ordinary building lumber. Its strength is a great advantage in floors, where heavy loads are carried. A surface coat of three inches of concrete secures a rigid, permanently satisfactory floor strong enough for the heaviest trucking and storage.

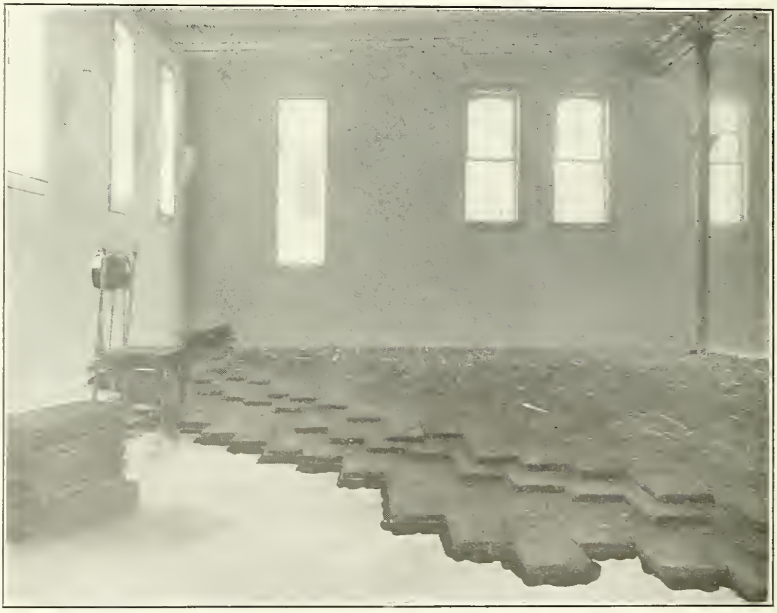
Strong and inexpensive partitions can be erected with one course of Star Corkboard set on edge, plastered on each side.

The heat conductivity of Star Corkboard for 1″ thick is within 1 B. T. U. per square foot of the lightest pure corkboard made. Careful tests, devised to assure exact data, give Star Corkboard a heat transmission value of 7 B. T. U. per square foot, 1 inch thick per degree diff. per 24 hours. These tests were made under and supervised by Prof. Frederick L. Pryor, M. E., of Stevens Institute of Technology of Hoboken, N. J. They have been issued in pamphlet form. Copies will be sent upon request.

Star Corkboard is manufactured from the best grade granulated natural cork. Every granule is thinly but thoroughly coated with a

special odorless, waterproof binder and then compressed into board form. It is not subjected to extreme heat or undue pressure during the process. We mention this because extreme pressure destroys the cellular structure, while excessive heat destroys the life of the cork.

In Star Brand Corkboard the granules of cork do not exceed ½". Thus voids to be filled with waterproofing are very small and allow the maximum amount of pure cork in proportion to the mixture to be used. To be exact, the proportions are 94% pure cork and 6% of waterproof binder, by volume.



Three layers of 2" Star Cork Board. Lone Star Brewery, San Antonio, Texas.

The waterproof binder used in Star Corkboard has a heat conductivity of its own from 9 to 10 B. T. U.'s—a fact of considerable importance in the choice of a proper insulator.

Tests made at our plant and by the National Board of Fire Underwriters' Laboratories at Chicago proved the great fire-resisting quality of Star Corkboard.

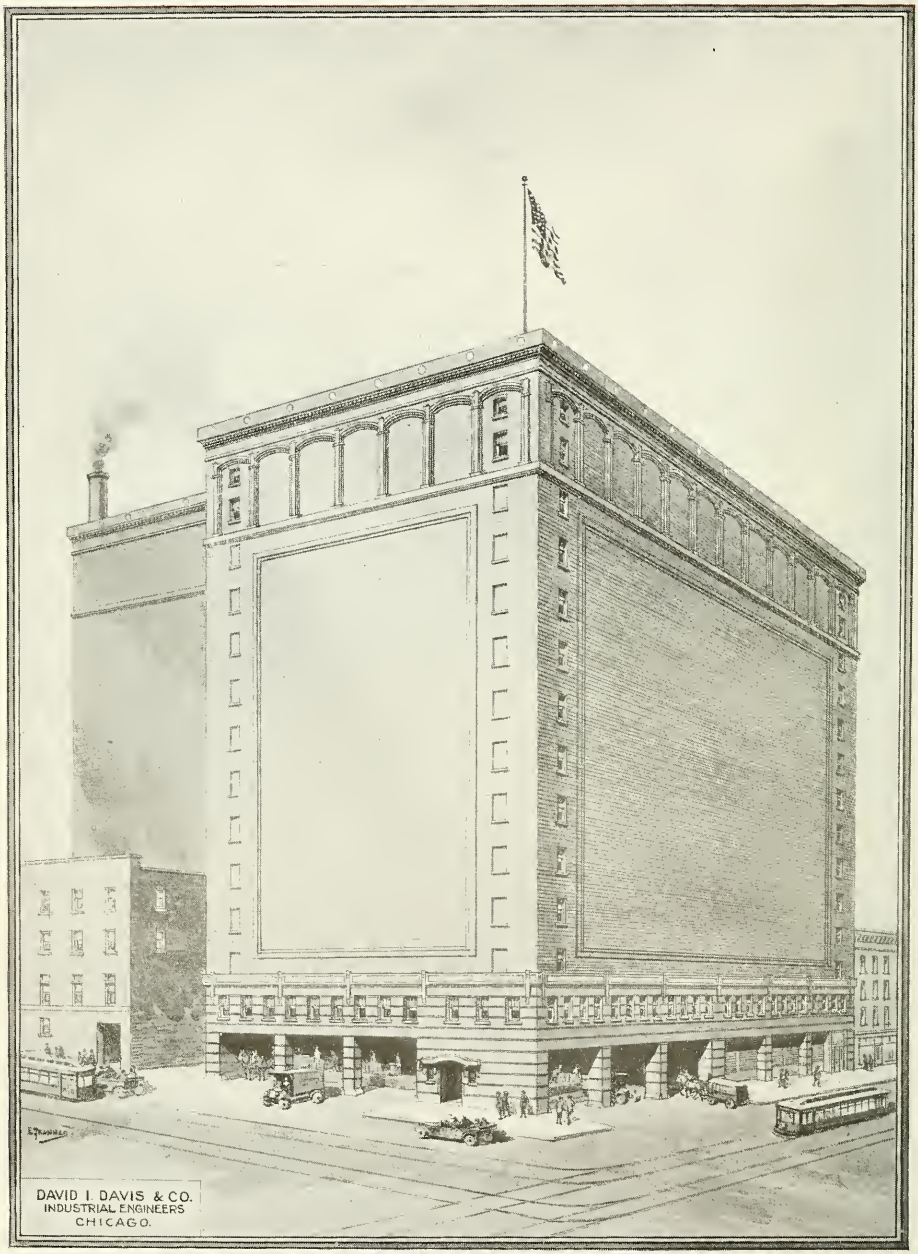
With due allowance for the slight difference in conductivity—the insulating value of Star Corkboard dollar for dollar is as great as that of any high grade pure corkboard.

Economy Corkboard

The Economy Brand of Corkboard has been put on the market for the purpose of meeting the demands for a cheaper Corkboard than either the "Crescent" or "Star" brand. It is made from selected regranulated cork which has been carefully screened and sifted, and mechanically mixed with the same Corkboard Binder as is used for our Star Corkboard.

The heat retarding value of the Economy Corkboard is naturally somewhat less than that of the Crescent Corkboard and it has not quite the structural strength of the Star Corkboard, but it combines all the other advantageous qualities of both of these two brands. We can conscientiously recommend Economy Corkboard for many purposes where investment is a prime factor to be considered by intending buyers.

Economy Corkboard, although a little lighter in weight, is classified the same as Star Corkboard for all shipping purposes. It can be substituted for either Crescent or Star Corkboard in many of the specifications calling for these two brands.

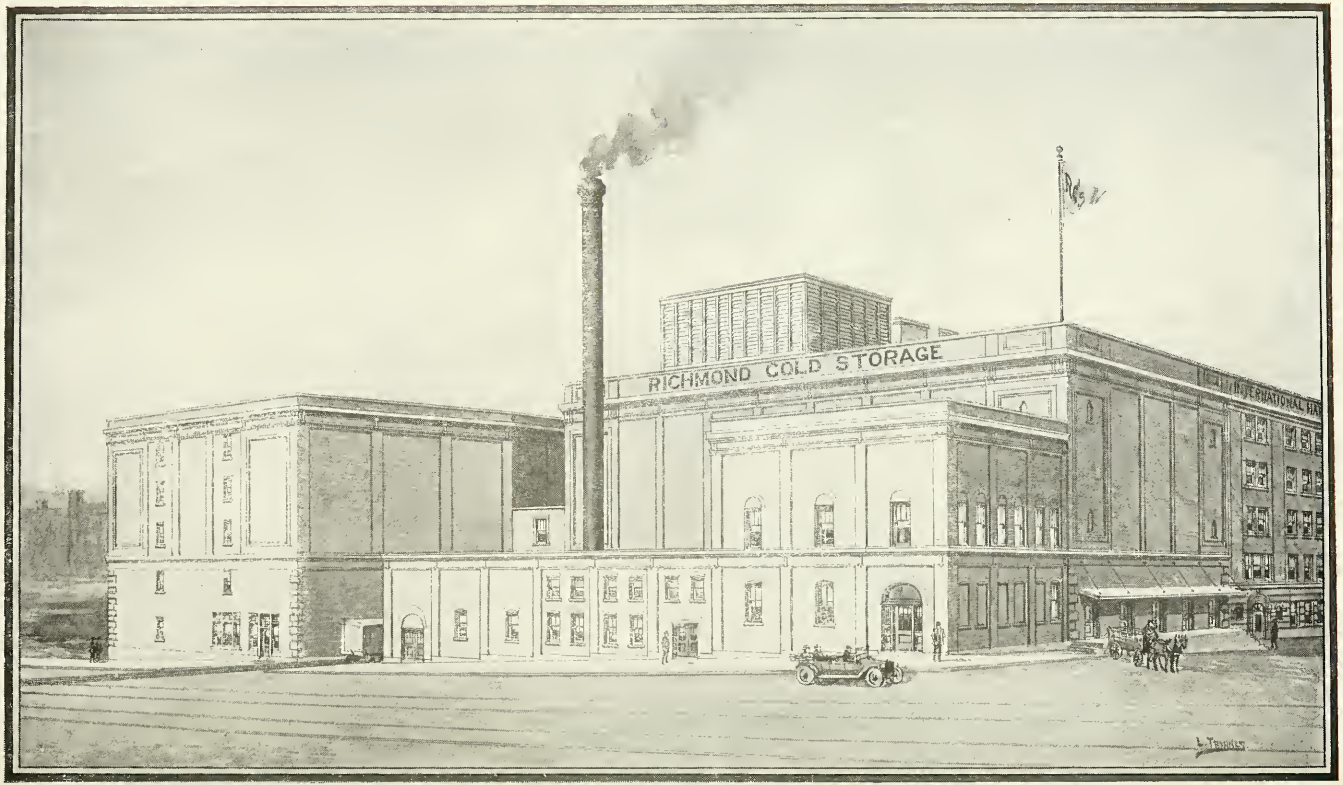


Central Cold Storage Company, Chicago, Ill. Four million cubic feet of Cold Storage Space. Largest Modern Cold Storage Warehouse in the World. Insulation furnished and erected by The United Cork Companies of New York. Fifty carloads of Crescent Corkboard were used in this Building.

Crescent (Pure) Corkboard

In Europe, the home of pure corkboard, it is generally employed under conditions where little moisture is encountered. In the United States pure corkboard is bringing good results in all kinds of cold storage work. Naturally it has not the same structural strength as Star Corkboard, but it is adaptable for all kinds of construction.

Showing Wall Insulation Consisting of Two Layers of 2" Crescent Corboard Embedded in ½ inch Cement against Brick Walls.
P. Berry & Sons', Inc., Plant, Hartford, Conn.



One quarter of a million feet of Crescent Corkboard were installed in this Cold Storage Plant.

UNITED CORK COMPANIES

Crescent Corkboard is 100% pure screened, granulated cork. The cork is carefully sifted—the granules being from 1/8" to 1/2" in diameter—thoroughly mixed, so that the smaller granules fill up the voids between the larger pieces and produce a uniformly even board.

After being filled into iron moulds, compressed to the thickness of the board desired, the granulated cork is baked for several hours at a moderate temperature. No foreign binder is used. The heat liquifies the natural gum of the cork and binds the particles upon cooling. This gum or sap has the additional advantageous quality: that of acting as a natural waterproofing. Baked granulated cork is less absorbent and more waterproof than the natural cork itself.

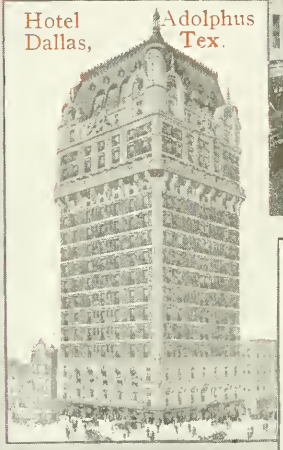
An illustration of the waterproof quality of baked granulated cork may be had by heaping a bag or two of fine regranulated cork upon the open ground exposed to the weather. Neither rain, nor snow nor fog will penetrate beyond the surface for more than a fraction of an inch. Even after being thus exposed for years, the cork will be found to be perfectly dry and sound below the surface.

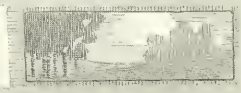
The U. S. Navy requires that **Pure** corkboard when boiled for four hours shall expand not over 2% in any direction. Crescent (Pure) Corkboard fully meets this requirement.

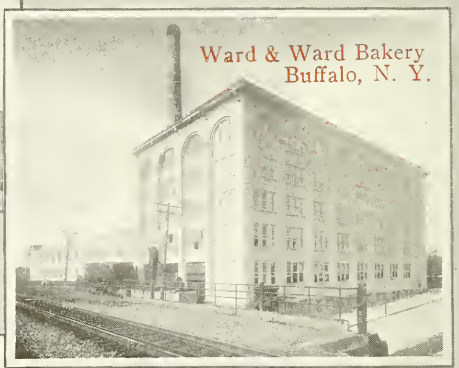
An Effective Use of Crescent Corkboard Insulation in the Plant of the Sherman Ice Co., Sherman, Texas.

Boston
Fish Pier.

Hotel Adolphus
Dallas, Tex.







Ward & Ward Bakery
Buffalo, N. Y.

St. Elizabeth's Hospital
Brighton, Mass.

Adelphia Hotel
Phila, Pa.

This group including a Fish Pier, Hospital, Bakery and Hotels typifies the wide scope of purposes for which our Cork Insulation has proved adaptable.

Crescent Corkboard has the highest non-conductive value of any commercial insulator.

Many and varied tests place the heat conductivity of pure corkboard at 6.4 B. T. U.'s per sq. ft. 1″ thick per degree difference in temperature per 24 hours.

Tests conducted for us by Prof. Frederick Pryor, of Stevens' Institute of Technology, give Crescent Corkboard a rating close to 6 B. T. U.'s and less which represents an insulating capacity unexcelled by any other product. The tests referred to were conducted with a sincere view of evolving definite and incontrovertible facts. To attain this neither expense nor effort was spared.

Claims for a better efficiency have been made, but conditions at laboratories are never duplicated in actual practice, and the slightest variation of conditions under which tests are made, will give vastly different results.

We consider Prof. Pryor's experiments the greatest forward step of the establishment of a standard test that has ever been made. These tests have been issued in pamphlet form. Copies will be sent upon request.

In presenting Crescent Corkboard—we sincerely believe that we are offering a product superior to any similar article ever evolved, either in America or in Europe.

We think we are meeting the efficiency issue thoroughly when we unequivocally guarantee that Crescent Corkboard is unexcelled in quality or efficiency by any other board on the market.

SUMMARY

Before leaving the subject, we wish to sum up the features, which combined, make corkboard insulation the best and most economic form of insulation for all refrigerating plants.

First—Corkboard insulation provides the **Maximum Amount of Insulation Efficiency** because it embodies the largest proportion of the substance whose heat conductivity is less than that of any other known substance that can be commercially used for the purpose, i. e., "Air".

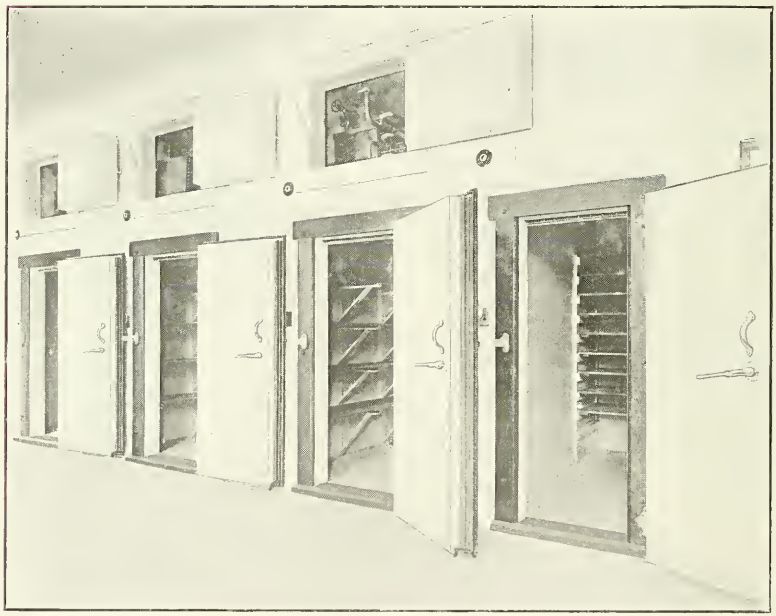
Second—Corkboard insulation allowing compact construction occupies a **Minimum of Space,** thus assuring increased storage capacity. That this saving of space is a factor of greatest importance may be seen by the following example:

> If a building 100′ x 100′ x 50′, designed to carry a temperature of 30° F., is insulated with Corkboard, but 4″ of cork for the walls, floor and ceiling will be required. Erecting the Corkboard in two courses with cement mortar; walls and ceiling finished with ½″ cement plaster and the floor with a 4″ concrete wearing floor, the space occupied by the insulation itself will be but 19.760 cubic feet. Air space construction of the same non-conductive value made up of 1″ boards

and 1″ air spaces would require 10 air spaces and 11 boards, *i. e.*, 21″ in all. Thus, this form of insulation would take up about four times the space occupied by the Corkboard, viz.: 66,981 cubic feet.

Records kept of investment costs of cold storage buildings show a variation of from 35 cents to 45 cents per cubic foot for land, building and insulation.

Hence, the space gained by using corkboard, *i. e.*, 47,221 cubic feet is worth from $16,527 to $21,249; or, figuring the returns derived from the saved space at an average of 1 cent per month per cubic foot, an annual gain of $5,666.52 can be made. In smaller buildings the saving will be still greater.



Illustrating Cork Insulation in Hotel and Institution Kitchens.

Third —Corkboard insulation remains **Permanently Efficient.** It has no capillarity. It resists moisture, hence undergoes no alteration in its insulation properties.

Fourth —Corkboard requires **No Expense for Repairs.** Once erected in a proper workmanlike manner it will stay put and last as long as the building itself.

Fifth—Corkboard being non-absorbent, germ and vermin proof, not subject to decay, is **Free from Odor and Absolutely Sanitary**—features of greatest importance in rooms or buildings where perishable products are stored—such as milk, butter, eggs, meats, etc., etc., which are easily affected or subject to contamination.

U. S. Dreadnaught Arizona—the latest addition to Uncle Sam's sea force. The use of Crescent Corkboard where perfect insulation is needed—is one of the modern features of its construction.

Sixth—Corkboard insulation directly applied to the surfaces and finished with cement plaster ½″ thick is the only form of insulation that provides **an Actual Fire Protection.**

Cork Insulated Refrigerators in Large State Institution.

Corkboard—and this applies to Star as well as Crescent—is slow to ignite. After being ignited it will not support combustion unless outside fuel and draft is continuously supplied. Left to itself the ignited cork will extinguish of itself.

The National Board of Fire Underwriters of Chicago has approved corkboard insulation constructed of two courses of 2″ each set into a

½" bed of cement mortar with a cement plaster finish, and this form of insulation will help to reduce fire insurance rates.

Seventh —Corkboard has **SUPERIOR STRUCTURAL STRENGTH** as compared with any other insulator. It can be used for the erection of partitions without any other supports and laid in floors carrying the heaviest loads without risk of deflection. This is particularly true of our Star Brand Corkboard. If interested let us send you a pamphlet on Compression Tests by Prof. Pryor.

Corkboard can be built up the same as brick and sawed, trimmed and nailed the same as lumber.

Any competent mechanic can erect it.

Room in Plant of Jacob Dold Packing Co., Buffalo, N. Y.

Eighth —Corkboard in spite of its somewhat higher initial cost of installation is THE MOST ECONOMIC INSULATION that can be used when efficiency and permanent service are considered.

The feature of expense being frequently of vital importance as to how much insulation should be employed, we give below a calculation based on conditions ordinarily to be found in the latitudes of the United States. This will illustrate the advantages and the saving that will be effected by the use of corkboard.

Taking a room 25′ x 50′ x 10′ with 13″ brick walls, 6″ concrete ceiling and 6″ concrete floor, located in New York City (mean annual temperature about 52° F.) to be kept at a temperature of 30° F., a saving of $686.70 per year will be effected, if the room is insulated with 4″ of Corkboard vs. an uninsulated room of the same size and under the same conditions. If such a room is to be kept at a temperature of Zero F., the saving effected runs up to the formidable sum of $1,679.85 per year, assuming in this instance that 6″ of Corkboard was used for the insulated room.

Let us examine these figures in detail.

A—ROOM KEPT AT 30° F.

(1)—*Uninsulated.*

Let us designate:

The area of Walls	(25 + 50) 2 x 10	=	1500 sq. ft. as W.
The area of Ceilings	25 x 50	=	1250 sq. ft. as C.
The area of Floor	25 x 50	=	1250 sq. ft. as F.

Let us further designate the known heat transmissions through the walls, ceiling and floor per square foot per degree difference in temperature per 24 hours, as follows:

13″ Brick Wall	—viz.:	7.926 B. T. U. as WT.
6″ Concrete Ceiling	—viz.:	17.200 B. T. U. as CT.
6″ Concrete Floor	—viz.:	17.200 B. T. U. as FT.

and

The deg. diff. in temp. (52°—30°)	—viz.:	22° as D.
The No. of days in the year	—viz.:	365 as Y.
The No. of B. T. U.'s per ton of refg.	—viz.:	288,000 as R.

Then the following example will represent the refrigeration required to take up the heat transmitted into an uninsulated room in one year:

$$\frac{W \times WT \times D \times Y}{R} = 331.5 \text{ Tons}$$

$$\frac{C \times CT \times D \times Y}{R} = 599.5 \text{ Tons}$$

$$\frac{F \times FT \times D \times Y}{R} = 599.5 \text{ Tons}$$

A TOTAL OF 1530.5 Tons of Refg.

(2)—*Insulated with two courses of 2″ inch Corkboard.*

Let us again designate the known heat transmissions through the walls, ceiling and floors insulated with two courses of 2″ Corkboard per square foot per degree difference in temperature per 24 hours, as follows:

13″ Brick Walls;	4″ cork and 1½″ P. C. Mortar	—viz.:	1.38 B. T. U.'s as WT′
6″ Concrete Ceiling;	4″ cork and 1½″ P. C. Mortar	—viz.:	1.452 B. T. U.'s as CT′
6″ Concrete Floor;	4″ cork and 4 ″ wearing floor	—viz.:	1.4 B. T. U.'s as FT′

The refrigeration required to take up the heat transmitted into the insulated room in one year will be

$$\frac{W \times WT' \times D \times Y}{R} = 57.7 \text{ Tons}$$

$$\frac{C \times CT' \times D \times Y}{R} = 50.7 \text{ Tons}$$

$$\frac{F \times FT' \times D \times Y}{R} = 48.7 \text{ Tons}$$

OR A TOTAL OF 157.1 Tons of Refg.

Thus by using an insulated room 1530.5—157.1=1373.4 tons of refrigeration will be saved every year. At an estimated cost of 50c. per ton of refrigeration the saving will come to $686.70.

B.—ROOM KEPT AT ZERO F.

(1)—*Uninsulated.*

Using the same example as under "A" the only change being the value of "D", difference in temperature (now 52°—0°=52°) the result shows

$$\frac{W \times WT \times D' \times Y}{R} = 783.5 \text{ Tons}$$

$$\frac{C \times CT \times D' \times Y}{R} = 1416.9 \text{ Tons}$$

$$\frac{F \times FT \times D' \times Y}{R} = 1416.9 \text{ Tons}$$

OR A TOTAL OF 3617.3 Tons of Refg. Required.

(2)—*Insulated with two courses of 3" Corkboard.*

The heat transmitted through the walls, ceiling and floors insulated with two courses of 3" Crescent Corkboard per degree difference in temperature per 24 hours is

13" Brick Walls 6" cork and 1½" P. C. Mortar — viz.: .956 B. T. U.'s as WT"
6" Concrete Ceiling; 6" cork and 1½" P. C. Mortar — viz.: 1.00 B. T. U.'s as CT"
6" Concrete Floor; 6" cork and 4 " wearing floor — viz.: .98 B. T. U.'s as FT"

With these changed values our example shows the following result:

$$\frac{W \times WT'' \times D' \times Y}{R} = 94.5 \text{ Tons}$$

$$\frac{C \times CT'' \times D' \times Y}{R} = 82.4 \text{ Tons}$$

$$\frac{F \times FT'' \times D' \times Y}{R} = 80.7 \text{ Tons}$$

OR A TOTAL OF 257.6 Tons Refg. Required.

Thus by using the insulated room 3617.3—257.6=3359.7 tons of refrigeration will be saved. At an estimated cost of 50c. per ton this amounts to $1,679.85, as stated above.

At the current prices for material and labor including the concrete wearing floor and plaster finish:

The cost of insulating a room as used for Example "A" amounts to $1,476.00

The cost of insulating a room as used for Example "B" amounts to $1,940.00

Accordingly, the annual return on the investment for the insulation represents:

46.5% for a room to be kept at 30° F. Example "A".
and
86.6% for the room kept at Zero F. Example "B".

These results have been based upon the mean annual temperature of New York City. For any locality having a higher mean annual temperature, which takes in the entire South and South-West, this saving will be still greater. It will be in direct proportion to the increase in the mean annual temperature.

Surely such returns cannot be ignored. They may spell success or failure to the enterprise.

Various Other Uses of Corkboard

The possibilities of corkboard are by no means confined to cold storage insulation.

More and more—the advantages of Corkboard Insulation are being recognized and made use of for such purposes as follow:

INSULATING RESIDENCES—Where roofs of residences are insulated with Corkboard it removes from the upper rooms the discomfort from cold in the winter and heat in the summer. If the Corkboard is used for walls as well it will insure a great saving of fuel in the winter. Excellent cooling effects are also obtained where roofs of porches are insulated with Corkboard. These uses are being adopted more and more in this country, while in Europe they have long been recognized as practical facts.

The Roof and All Walls of this Residence were Insulated with Corkboard

The residence in the accompanying illustration was completely insulated with 1″ of Crescent Corkboard, roof and walls, including built-in refrigerator. The saving of coal alone has been determined at more than 20%. Of greater value does the owner consider the added comfort during the extreme seasons.

AIR COOLING—Wherever air cooling is desired or necessary as for Fever Rooms in Hospitals, Restaurants, Hotels, Theatres, Offices, Churches, Laboratories, etc., corkboard is employed with great economic results.

SOUND AND VIBRATION PROOFING — Surprising results are obtained by the use of a layer of corkboard under machinery of all kinds, fans, motors, stamping presses, etc., etc. Laid on the floors of drill rooms corkboard will effectually prevent sound penetrating to lower floors.

PROVIDING FOR RESILIENCY—As an under layer of other forms of flooring, Corkboard will provide a resiliency so much desired and appreciated in gymnasiums, athletic courts, dance floors, etc. Corkboard has been used in many places for this purpose with excellent results.

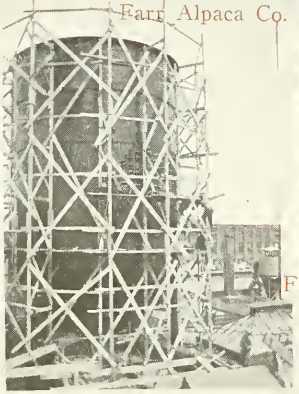
CONDENSATION PREVENTION—Where condensation from concrete or other roofs occurs, as is the case in flour mills, chemical works and other industrial buildings a layer of corkboard put on the roof slab will entirely overcome this trouble even with an inside and outside temperature difference of 100° F.

RAILWAY CARS—Refrigerator, Passenger, Tank, and in fact all transportation cars are embraced in the field of practical insulation with Corkboard. We insulated over 300 cars during the summer of 1915.

Showing One of 300 Refrigerator Cars Insulated with Corkboard during the Summer of 1915.

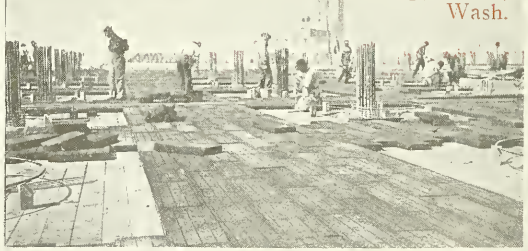
BATTLESHIPS—The obvious necessity of insulation against explosions in a powder magazine immediately suggests the use of Corkboard for this purpose. Crescent Corkboard has been used in a large number of battleships of the U. S. Navy. We have furnished several

Insulated Tank of Farr Alpaca Co.

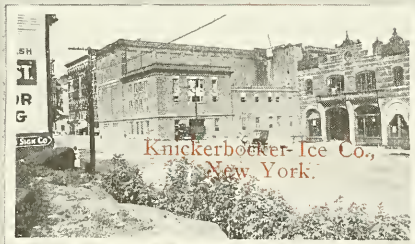


Floor of Biltmore Hotel Rink, New York.

Port Commission Bldg., Seatle, Wash.



Horn & Hardart Bakery.



Knickerbocker Ice Co., New York.

A group of Buildings in which our Cork Insulation was successfully employed.
One and one-half million feet of our Crescent Corkboard was used in the Port Commission Building.

hundred thousand feet during the last few years for this purpose. Our most recent installation was in the dreadnaught Arizona, recently put into service.

Some general idea of the various uses to which Corkboard has been put may be gained from the following list showing industries to which we have furnished Corkboard during the last year or two.

This list, at best, can be considered but partial:

Agricultural Works
Automobile Manufacture
Bakeries
Battleships (Magazine Cooling)
Bleaching Works
Blast Furnaces (Air Drying)
Bottling Works of all kinds
Breweries, Beer Storage
Brine Tanks
Canning Industries
Candle Manufacture
Celluloid Works
Cheese Factories
Chemical Plants
Chocolate Manufacture
Cider Works
Cigar Factories, Cigar Storage
Cold Air Plants
Condenseries
Cotton Mills
Creameries
Dairies
Dehydrating
Department Stores
Distilleries
Dredges, etc.
Dyeing Works
Egg Freezing
Electrical Supply Plants
Experiment Station Work
Explosives, Manufacture and Storage
Filtering Plants
Fish Freezing, Storage
Florists
Fruit Handling
Fur Storage
Glass Factories
Glue Factories
Grocery Stores
Hospitals
Hotels
Humidors
Ice Skating Rinks
Ice and Ice Cream Delivery Wagons
Incubators
Ink Manufacture
Isinglass Factories
Laboratory Work
Lard Refining
Laundries
Leather Factories
Liquid Air Manufacture
Liquor Stores
Malt and Malt Extract Manufacture
Match Factories
Meat Markets, Curing, Storage
Markets
Medical Treatment Cold Roms for Fever Patients
Mercerizing Works
Mining and Smelting
Morgues
Nurserymen
Office Buildings (Cooling Drinking Water)
Oil Refining
Oleomargerine Factories
Optical Instrument Manufacture
Oyster Handling
Ozonating Plants
Packing Houses
Paint Works
Paper Mills
Paraffine Works
Perfumery Factories
Photo Material Manufacture
Precooling
Produce and Vegetable Merchants
Prolonged Animal Hibernation (Silk Worms, Ladybugs)
Public Buildings
Railroad Stations
Railroad Cars
Rendering Works
Residence Cooling
Restaurants
Rubber Plants
Salt Refining
Sausage Manufacture
Saw Mills
Silk Mills
Shaft Sinking
Soap Factories
Steamships
Steel Works
Street Pipe Line Refrigeration
Sugar Refining
Sulphite Fibre Works
Syrup Factories
Tanneries
Testing Plants
Thermometer Manufacture
Tobacco Factories
Turkish Baths
Varnish Works
Vaults and Safes
Vinegar Factories
Watch Factories
Weaving Sheds
Wineries
Woolen Mills
Yeast Manufacture
Zinc Shavings

Cork Bricks

Star Cork Bricks are made from granulated natural cork mixed with a specially refined asphalt binder.

The mixing process is continued until all the granules of the cork are thoroughly coated and bound together. The wearing qualities and service of cork bricks depend upon the thoroughness of this mixing process. Therefore the greatest care is exercised throughout the operation.

In Star Cork Bricks no granules are used that are too large to go through a ⅛″ mesh. This gives density and solidity. The asphalt binder has a high melting point and when mixed with the fine ground Cork about 30% asphalt and 70% cork makes an unexcelled flooring wherever animals are kept.

The additional advantages of warmth and resiliency render Cork Brick ideal for this particular purpose.

The character of the bricks keeps them from becoming hard and cold, and thus protects the animals from the distempers caused by cold floors.

Such a floor also insures a comfortable, easy and non-slippery footing—absolutely sanitary. Thus for stables, barns, hog and sheep pens, and particularly cow stables—Star Cork Bricks are ideally adapted.

For pavements and floors in and around workshops and warehouses, especially where fragile goods are manufactured, Star Cork Bricks are highly recommended, since they will save much of the breakage and damage that would otherwise be caused by falling of breakable goods.

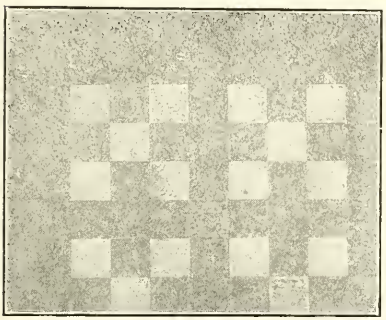
An ordinary workman can lay Star Cork Bricks. The bricks may be laid over wood floors, after protecting the wood with a layer of asphalt.

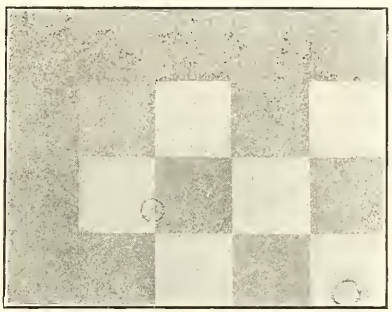
However, the best practice is to provide a foundation of concrete. See specification No. 23 on page 99.

Star Cork Bricks are 2″x 4″x 9″, and as they are laid flat four of them will cover a square foot. Each brick weighs about 2½ lbs.

For shipping information, freights, etc., see pages 145 to 149.

Crescent Cork Tile or Flooring





Crescent Cork Tiles are the ideal flooring for all places where the greatest amount of comfort, combined with real sanitary conditions are desired.

Crescent Cork Tiling laid in the Office, Library, Club, Hospital, School, Church, Bath and Public Buildings of all kinds, will do away with many of the strains that sap our nervous system. It will add to our comfort, during the hours of our work and study as well as during the hours of leisure and recreation.

A floor laid with Crescent Cork Tiles, being absolutely noiseless, acts as a sound insulator for the floor above and below. Besides, being always warm to the foot, non-slippery and elastic to the tread, it gives an incomparable ease in walking as well as standing, and in this respect is superior to any other flooring that can be used. It can be scrubbed with soap and water, and as it is impervious to liquids, does not warp or open at the joints. It will not deteriorate, absorb water or allow it to seep through. It is therefore more sanitary than either hardwood, marble, artificial stone flooring, as well as rubber and linoleum coverings. Oils and greases will not affect it.

Cork Tile Floor in Church of St. Martin of Tours.

Although somewhat more expensive as to first outlay, it will prove to be a most economical flooring. It needs no repairs. Should, through an accident, a few of the tiles become damaged, they can easily be replaced without disturbing the rest of the flooring.

Crescent Cork Tiles consist of pure granulated cork shavings obtained in the manufacture of high grade Cork Stoppers. The shavings are carefully freed from all hard pieces and foreign matter.

The proper quantity of cork shavings are placed into iron forms or moulds, and under powerful hydraulic pressure their volume is compressed about 12 to 1. The forms are conveyed into ovens and baked for several hours, after which the tiling is ready for cutting and polishing.

Crescent Cork Tiles are made in three different shades, light, medium and dark. They can be cut to any size from 3″ x 3″ to 12″ x 12″ or Oblong sizes such as 2″ x 4″, 6″ x 9″, 6″ x 12″, 9″ x 12″, 12″ x 36″. A square foot ½″ thick is the standard; weight, about 20 ounces.

By a judicious choice of shades and sizes, neat and attractive designs can be obtained. In connection with the flooring we also furnish a cork cove and base which will greatly improve the sanitary conditions and add to the attractiveness of the flooring. See Specification No. 47, on page 143.

If the installation is entrusted to us or our authorized agents, we will give a full guarantee covering the perfect workmanship as well as the wearing quality and services of the flooring.

Conclusion

The judicious selection of the proper cork product is a matter governed by individual conditions that attach to each particular case.

For each purpose and under each condition there is one "best to use". We can assist you to choose this one best!

Our broad experience with Cork in every conceivable form of construction, in all climates and under all conditions has given our organization of experts an impressively broad practical knowledge.

The fruits of their experience are yours for the asking; we are always at the command of interested seekers of information upon any phase of Cork Installation.

Do not hesitate to ask our co-operation in solving your problems —whatever they may be.

Construction Data

PART II

(Pages 39 to 50 inclusive)

General Recommendations and Suggestions Relating to Construction and Installation

In designing the proper insulation there are several factors to be considered which are likely to be different in every plant. They are:

1.—The temperatures to be maintained in the refrigerated rooms as well as the temperature outside surrounding the cold rooms.

2.—Climatic and atmospheric conditions.

3.—The kind of building, whether Frame, Brick, Stone, Concrete or Hollow Building Blocks.

4.—The thickness of walls, ceiling and floors to which the insulation is to be applied.

5.—The kind of goods to be stored in the rooms.

6.—The cost of producing refrigeration.

Subject to these factors we have compiled the following tables giving thicknesses of Corkboard that should be used for the various temperatures indicated. Under ordinary conditions these thicknesses have been found to give most economic results.

TABLE OF THICKNESSES

ROOMS OR BUILDINGS

THICKNESSES OF CORKBOARD RECOMMENDED FOR

Range of Temperatures	Walls		Ceilings		Floors On Ground		Floors Above Ground		Roofs	
	Crescent	Star	Crescent	Star	Crescent	Star	Crescent	Star	Crescent	Star
Below −15°F.	8″	9 ″	8″	9 ″	7″	7″	8″	9 ″	9″	9 ″
−15°F. to −5°F.	7″	8 ″	7″	8 ″	6″	6″	7″	8 ″	8″	8 ″
−5°F. to 10°F.	6″	7 ″	6″	7 ″	5″	5″	6″	7 ″	7″	7½″
10°F. to 25°F.	5″	5½″	5″	5½″	4″	4″	5″	5½″	6″	7 ″
25°F. to 40°F.	4″	4½″	4″	4½″	3″	3″	4″	4½″	5″	6 ″
40°F. to 50°F.	3″	3 ″	3″	3 ″	2″	2″	3″	3 ″	4″	5 ″
50°F. to 65°F.	2″	2 ″	2″	2 ″	...	...	2″	2 ″	3″	4 ″
60°F. & above.	...	...	...	...	...	...	...	...	2″	2 ″

FREEZING TANKS

THICKNESSES OF CORKBOARD RECOMMENDED FOR

Bottoms						Sides			
If placed on foundation laid on ground.		If placed on floor above ground.		If placed directly over refrigerated rooms.		Granulated Cork only.	Granulated Cork and Corkboard combined.		
Crescent	Star	Crescent	Star	Crescent	Star		Granulated Cork.	Crescent	Star
Minimum 5″	5″	5″	6″	4″	4″	8″	3″	4″	4″
Preferably 6″	6″	6″	7″	4″	4″	12″	4″	3″	3″
...	...	...	...	...	...	...	6″	2″	2″

CYLINDRICAL COOLERS, TANKS AND FILTERS FOR COLD LIQUIDS

THICKNESSES OF CORKBOARD RECOMMENDED FOR

Range of Temperatures	Sides	Top	Bottom
	Crescent	Crescent	Crescent
Below 0°F.....	6 ″	6 ″	6 ″
0°F. to 10°F.....	5 ″	5 ″	5 ″
10°F. to 25°F.....	4 ″	4 ″	4 ″
25°F. to 45°F.....	3 ″	3 ″	3 ″
45°F. to 55°F.....	2 ″	2 ″	2 ″
55°F. & above.....	1½″	1½″	1½″

CYLINDRICAL TANKS, FILTERS, Etc. FOR HOT LIQUIDS

THICKNESSES OF CORKBOARD RECOMMENDED FOR

Range of Temperatures	Sides	Top	Bottom
	Crescent	Crescent	Crescent
100°F. to 150°F.....	1½″	1½″	1½″
150°F. to 190°F.....	2 ″	2 ″	2 ″
190°F. to 212°F.....	3 ″	3 ″	3 ″

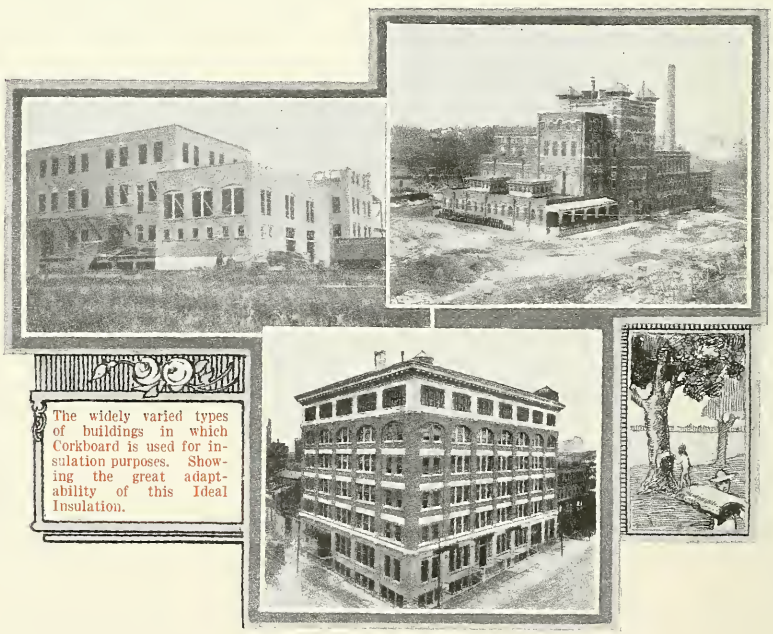
To obtain the highest operating efficiency, however, it is necessary to employ not only the proper thicknesses of Corkboard, but to use the right kind of building construction as well.

Walls and Ceilings

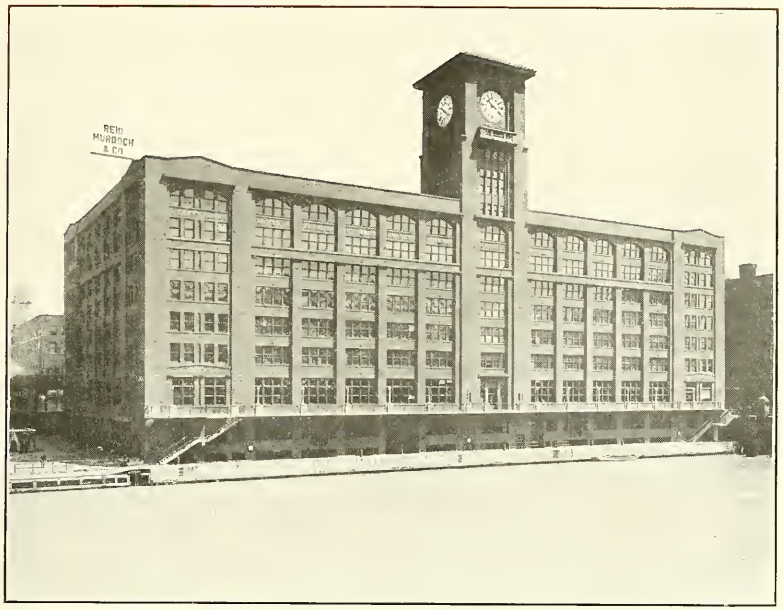
One of the greatest advantages of Corkboard is that it affords solid construction—actually becoming a part of the building. This advantage is frequently counteracted by the use of improper building materials.

Experience has demonstrated that air spaces in combination with Corkboard are detrimental to the efficiency of the insulation. They should be avoided for all cold storage work. Hollow building materials are not air tight. The air in the hollow spaces surrounding a cold room must necessarily become cooler than the outside temperature. The result of this difference in temperature will cause condensation of the moisture in the air in the hollow spaces, and in time water will find its way through the joints of the insulation.

Where hollow spaces are used or exist the surfaces should be made as air-tight as possible and if the insulation is applied in two



The widely varied types of buildings in which Corkboard is used for insulation purposes. Showing the great adaptability of this Ideal Insulation.



Reid, Murdock & Co. Plant at Chicago, Ill., in which about Twelve Carloads of Crescent Corkboard Insulation is Installed.

courses, all joints in the first course of Corkboard should be sealed with water-proofed cement before applying the second course.

Where frame ceilings or rooms directly under attics or ventilating lofts are insulated from the under side the joists should be left open on top and where ceilings are insulated from the top side or floor above the under side of joists should not be sheathed over, but left exposed.

Columns, Beams and Girders

In many instances too little attention has been paid to the insulation of columns, beams or girders. It is just as necessary to protect them as any other part of the building. Particular attention should be given to columns in the lowest floor if the temperatures maintained are below freezing. The earth around the base of unprotected columns will freeze and expand to such an extent that serious damage to the building itself may occur.

Roofs

Adequate roof insulation is of still greater importance than that of floors or walls. Roofs are the greatest exposure of any build-

ing. Walls with northern exposure receive little or no sun; walls facing east, south or west may be exposed for several hours, but the roofs get the full effect of the direct rays of the sun all day long. Roofs, therefore, always should receive at least one inch, but preferably two inches more Corkboard than walls.

Roof insulation has now also found wide adaptation in many lines of industries for prevention of condensation (sweating). Ordinarily one course of two-inch thick Corkboard will overcome this trouble completely.

Cork Partitions

Cork partitions have remarkable strength, but are not intended to carry loads. This type of construction is recommended for forming walls of coolers not occupying the entire story of a building, or for making divisions between rooms. No studding or reinforcing other than the cement mortar or plaster is required, excepting wooden frames at door or window openings. Where it is desirable not to build coolers to the full height of the story in which they are located,

About Fifteen Carloads of Star and Crescent Corkboard were Used in Insulating this Plant of Nuckalls Packing Co., Pueblo, Cal.

and it is found impracticable to suspend a ceiling from the floor above, the cork partitions may be reinforced with tee irons to carry the weight of the roof or ceiling.

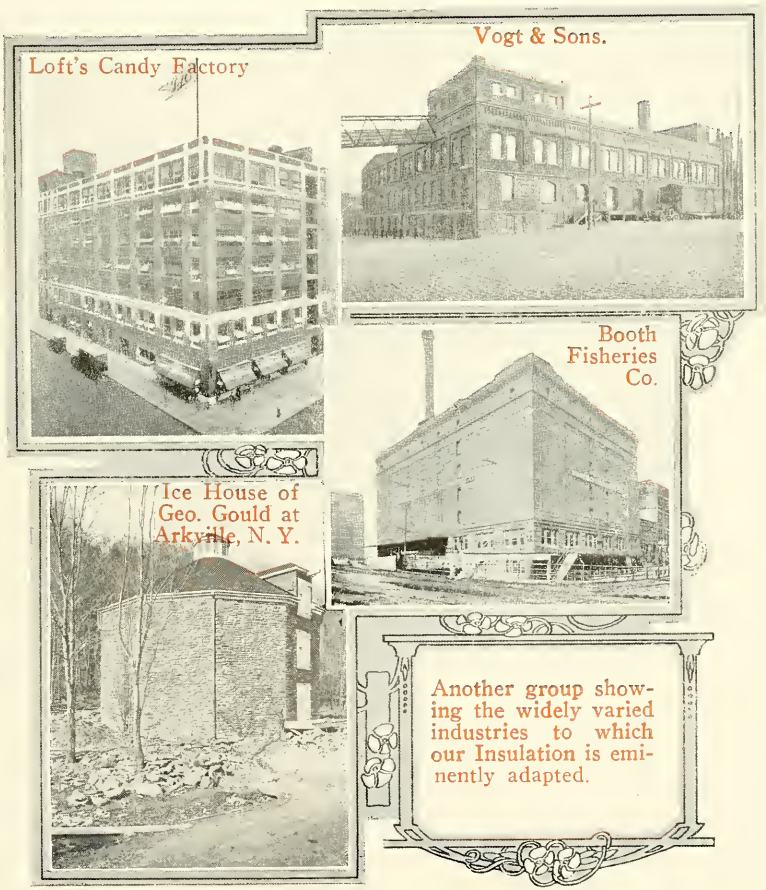
Coil Lofts or Bunkers

In some lines of trade, for example, meat packing, the desired result can only be obtained if the coolers are equipped with coil

lofts or bunkers. They induce air circulation. If the floors and curtain walls of bunkers are insulated, the circulation will be promoted and besides condensation of moisture on the under side of the bunker floor will be prevented. One course of 2″ or 3″ Corkboard will accomplish the desired result. This may be erected in hot asphalt and top coated with asphalt, then protected with water-proofing and concrete or asphalt mastic finish; or with ⅞ T. & G. boards covered with a water tight metal pan.

Floors on Ground

The importance of insulating ground floors is now generally recognized. The temperature of the ground is about 55° F., and remains fairly constant the year round. It is, therefore, of equal



importance to insulate a floor on the ground as it is to insulate the walls or the ceiling. Not only will there be a great saving of refrigeration, but unless the floors of freezing rooms are adequately insulated the ground will freeze gradually and cause an upheaval of the floor or even a derangement of the building's foundations. For this reason freezers with temperatures below 25°F. should always be located in the upper stories of a building.

Freezing Tanks

Freezing tanks should always be well insulated. The ice making capacity will be increased considerably if the bottoms and sides of tanks are insulated with the thicknesses given in the foregoing table.

Particular care for ample insulation should be given to the bottoms when placed on the ground. There are numerous cases on record where the bottoms of freezing tanks were forced up to such an extent that the tanks became useless and had to be replaced.

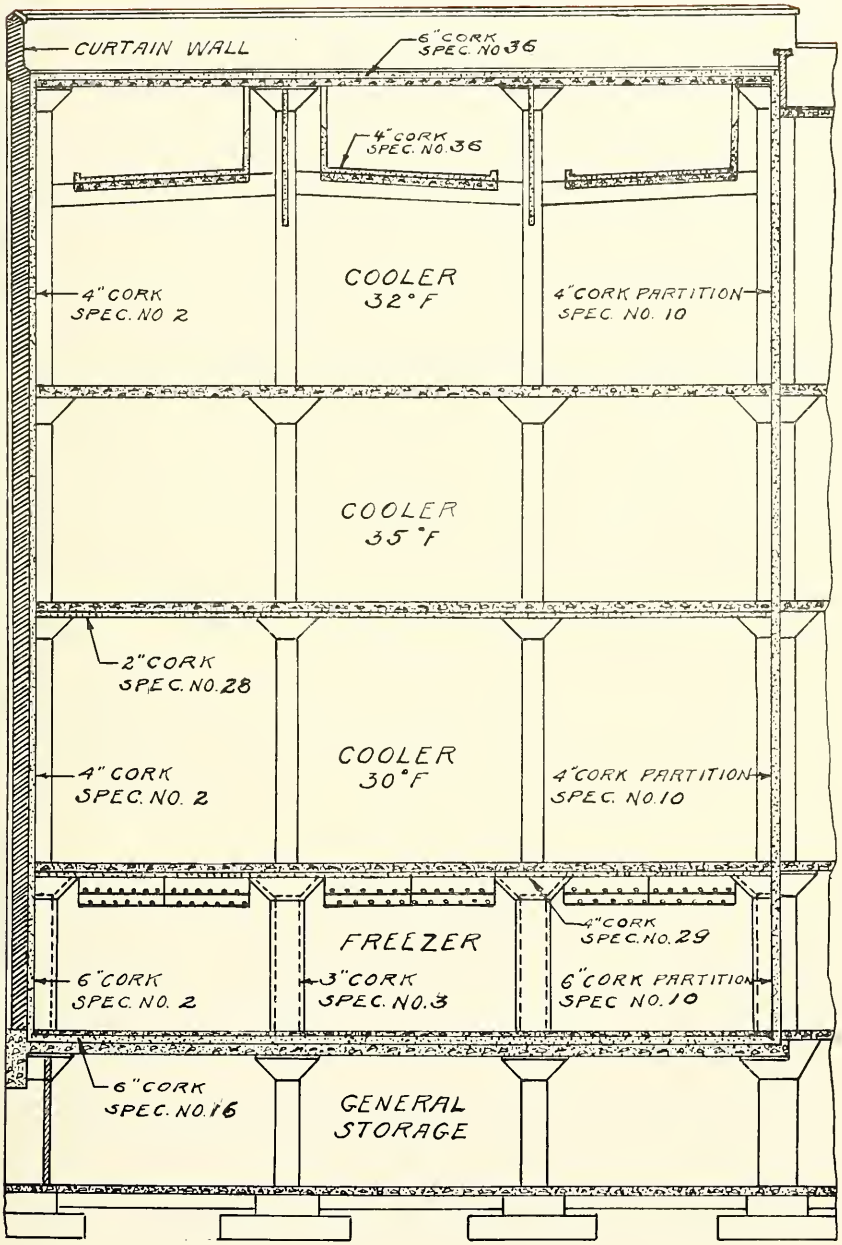
For insulating the exposed sides of tanks, a combination of Corkboard and Granulated Cork is preferable to all other methods. On account of the lapped seams of the tanks and the protruding rivets, it is difficult to fit the Corkboard against the tank without leaving intervening spaces.

Continuous Insulation

Complete insulation of a cold storage building is attained when the insulation of the walls, floors and ceiling is continuous and the cold storage spaces of the building are completely enveloped. It is obvious that this type of construction will result in the greatest operating efficiency by reducing the loss of refrigeration to a minimum. Nearly all the large cold storages erected during the last few years are built along these lines.

The section on the opposite page illustrates this present-day type of cold storage building construction. The building was designed for one of our large packing houses. It is of the so-called mushroom type, reinforced concrete construction, enclosed with brick curtain walls erected so as to leave sufficient space between the walls and edges of floor slabs, columns and beams to receive the proper thickness of insulation. The walls are entirely independent of the interior structure (excepting for galvanized iron anchors at intervals), and do not carry any of the live load of the storage.

The building is shown greatly reduced in size and illustrates how a large structure may be divided in two parts and yet completely insulate one section by erecting a self supported (solid) cork parti-



UNITED CORK COMPANIES

tion between split concrete columns and beams from the first story floor to the top of roof. The only break in the insulation is at points where iron anchors connect the walls with the interior structure.

Nails, Discs and Skewers

A word in regard to the use of nails, discs and skewers will not be amiss here. Galvanized wire nails or skewers should always be used in erecting Corkboard insulation. Common wire nails are useless as they will rust away.

Where Corkboards are secured together, wooden skewers may be used. They are preferred by some engineers on account of being

Plant of King Candy Co., Fort Worth, Texas, Insulated with Star and Crescent Corkboard

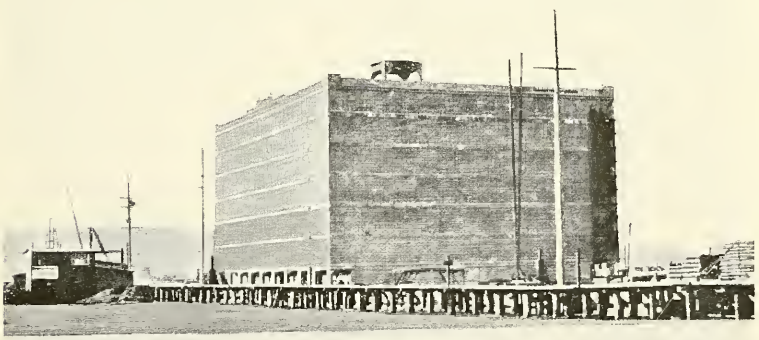
Bay City Brewing Co.'s Brewery, San Diego, Cal., Insulated with Star Corkboard.

better non-conductors as compared to nails. Skewers should be made of hard wood from 3/16″ to ¼″ thick and ½″ to 1″ longer than the two thicknesses of Corkboard.

The special galvanized wire nails called for in our specifications are made of small gauge to reduce the amount of metal and with extra large flat head to give them more holding power.

When two courses of Corkboard are erected to the underside of frame ceilings, the first course nailed and the second course erected in cement mortar with plaster finish, it is advisable to use galvanized iron discs of about 24-gauge and 1¼″ diameter for securely holding the first course in place. There is considerable weight to the cement mortar and plaster finish which would be sufficient to pull the first course of Corkboard over ordinary nail heads. Two or three special nails and one disc to each square foot of surface is all that is necessary.

A full stock of special galvanized nails, wooden skewers and galvanized iron discs is always carried at the factory and at all Branch warehouses of the United Cork Companies.



Port Commission Bldg., Seattle, Wash. A Million and a Half Feet of Crescent Corkboard was Used in the Insulation of this Building.

Ritz-Carlton, Philadelphia

All Refrigerators in this Hotel were built and installed by us.
Crescent Corkboard was used throughout.

Specifications

PART III

(Pages 51 to 144 inclusive)

Specifications

On the following pages we give detailed specifications accompanied by illustrations showing practically every type of construction that may be employed in old as well as new buildings.

Years of study by a corps of expert engineers have developed these methods of erection. We recommend that they be used as given, suiting the thickness of corkboard to the temperatures desired to be maintained.

There will of course occur special constructions for particular purposes; or unusual atmospheric conditions, temperatures, etc., may have to be met. For such cases separate and individual consideration is required. We cannot too strongly advise consulting experienced engineers before going ahead with any work of this kind.

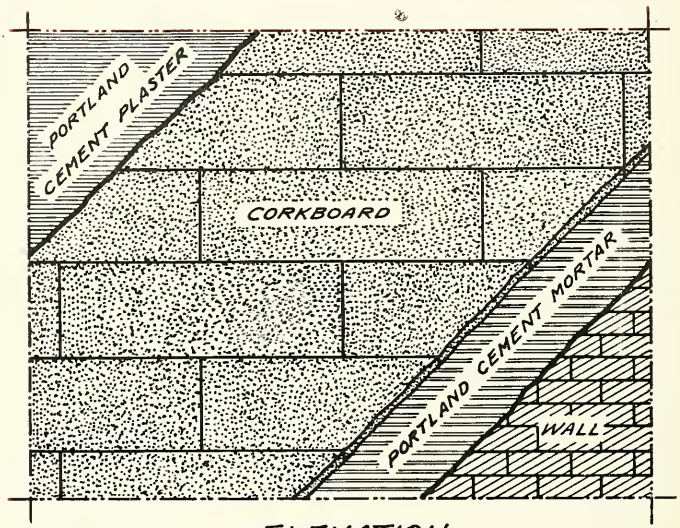
Upon application any one of our offices will be pleased to give such aid and advice as may be asked for. Our experience as well as the advice of our engineers is always at the service of those interested.

NOTE

Cement Plaster Finish

Portland Cement Plaster is the best and most durable finish for corkboard insulation, but it will develop shrinkage cracks to some extent. The mixture of cement mortar as specified will give best results but cannot be guaranteed to be entirely free from cracking. Such cracks, however, do not impair the efficiency of the insulation, and if the surfaces are scored off in squares as specified the cracking will occur in the score marks and will not show.

The above note is referred to in all specifications calling for cement plaster finish.



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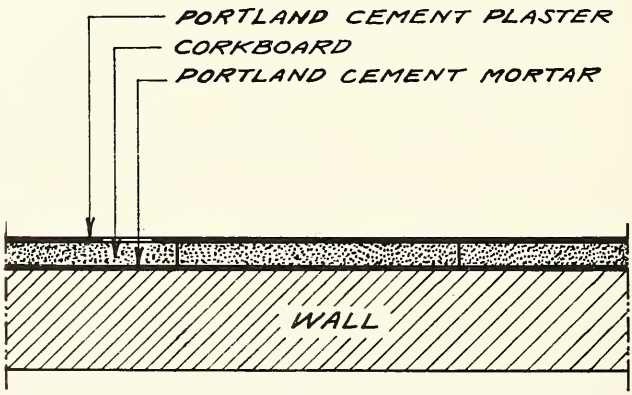


PLAN

No. 1

WALLS—*Masonry*

One Course of Corkboard

Applied with Cement

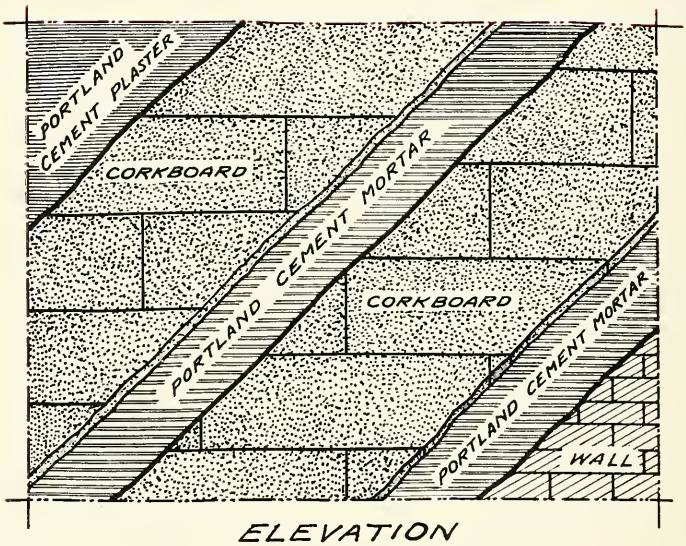
to Brick Concrete or Stone
Cement Plaster Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with a single course of ..... inch ..... Corkboard applied with a ½" bed of Portland cement mortar mixed one part cement and two parts clean, sharp sand. Corkboards are to be butted up close making tight fitting joints, and all vertical joints are to be broken. The exposed cork surface is to be finished with approximately ½" Portland cement plaster applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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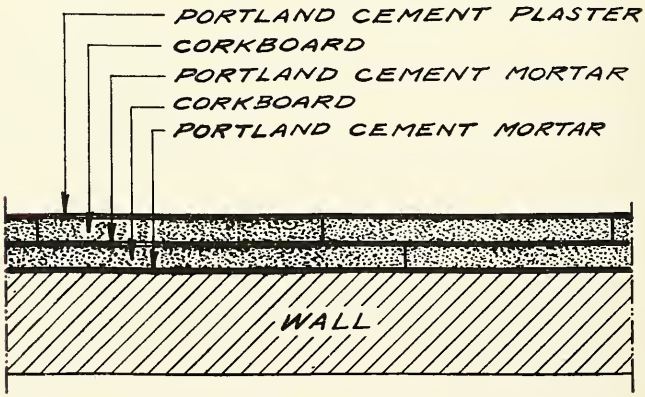


PLAN

No. 2

WALLS—*Masonry*

Two Courses of Corkboard

Applied with Cement

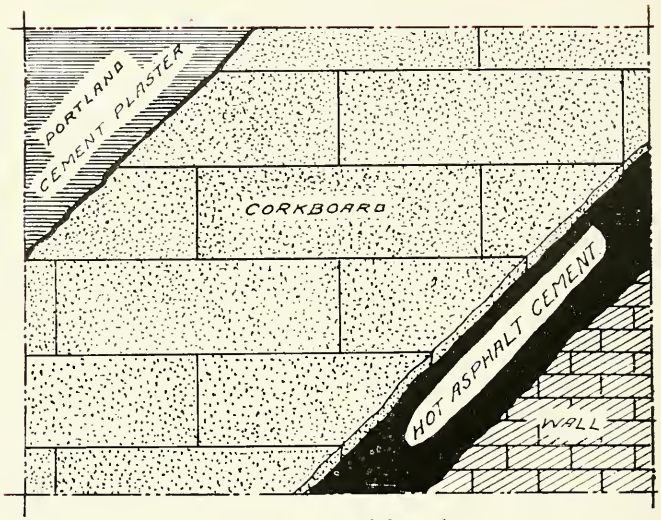
to Brick Concrete or Stone
Cement Plaster Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with ..... inches of ..... corkboard in two courses. The first course is to be ..... inches thick applied with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The second course is to be ..... inches thick applied against the first course with a ½" bed of Portland cement mortar and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All vertical joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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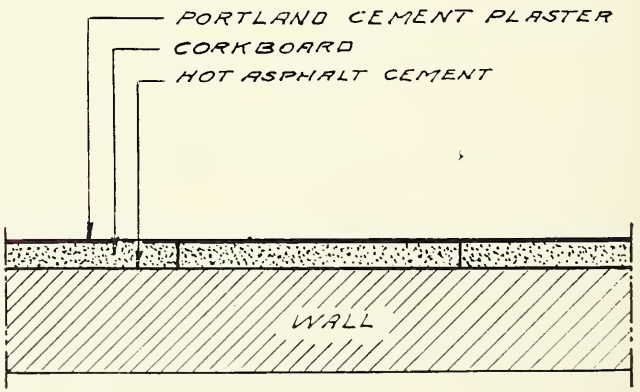


PLAN

No. 3

WALLS—*Masonry*

One Course of Corkboard

Applied with Asphalt Cement

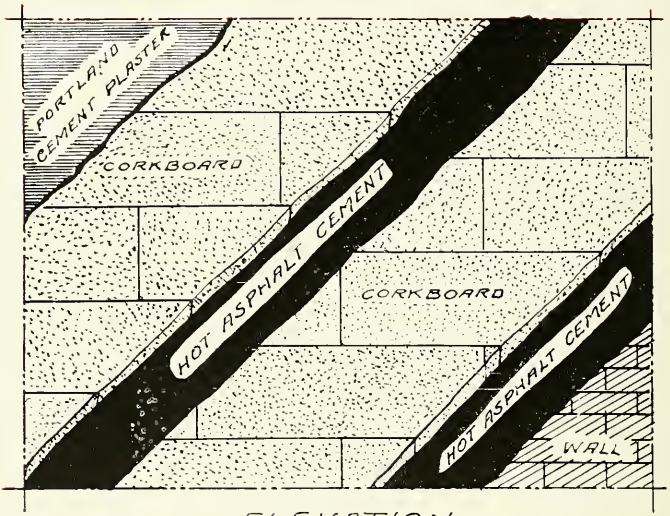
to Brick or Concrete
Cement Plaster Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with a single course of ..... inch ..... corkboard applied with hot asphalt cement. Before applying the corkboard the walls are to be mopped with hot asphalt. All corkboards are to be butted up close making tight fitting joints and all vertical joints are to be broken. The exposed cork surface is to be finished with approximately ½" Portland cement plaster applied in two coats mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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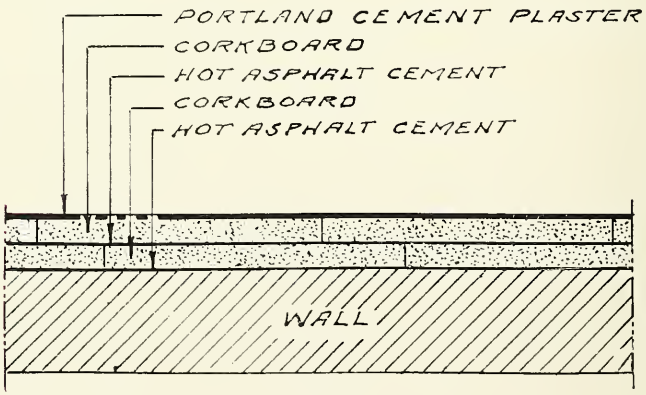


PLAN

No. 4

WALLS—*Masonry*

Two Courses of Corkboard

Applied with Asphalt Cement

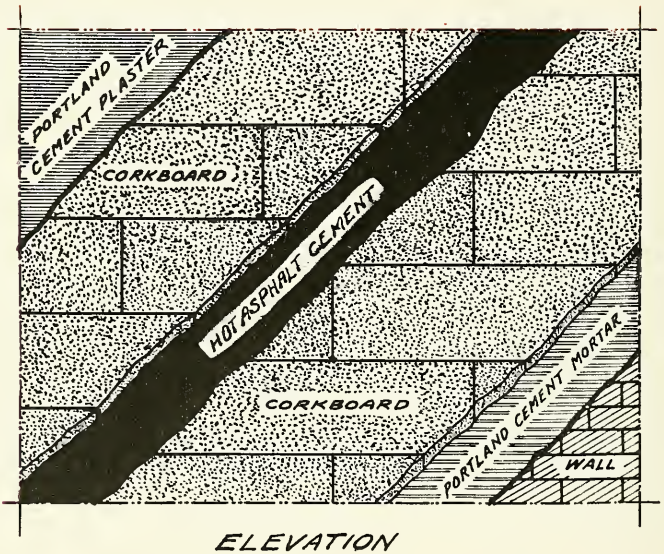
to Brick or Concrete
Cement Plaster Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with ..... inches of ..... corkboard in two courses. Before applying the corkboard, the walls are to be mopped with hot asphalt. The first course of corkboard is to be ..... inches thick applied with hot asphalt cement. The second course of corkboard is to be..... inches thick applied against the first course with hot asphalt cement and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All vertical joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster applied in two coats mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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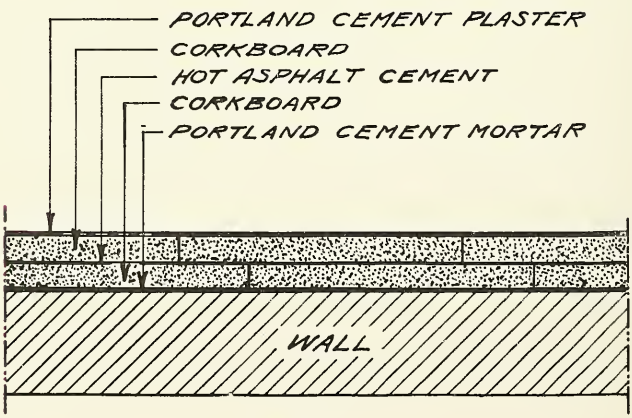


PLAN

No. 5

WALLS—*Masonry*

Two Courses of Corkboard

Applied with Cement and Asphalt

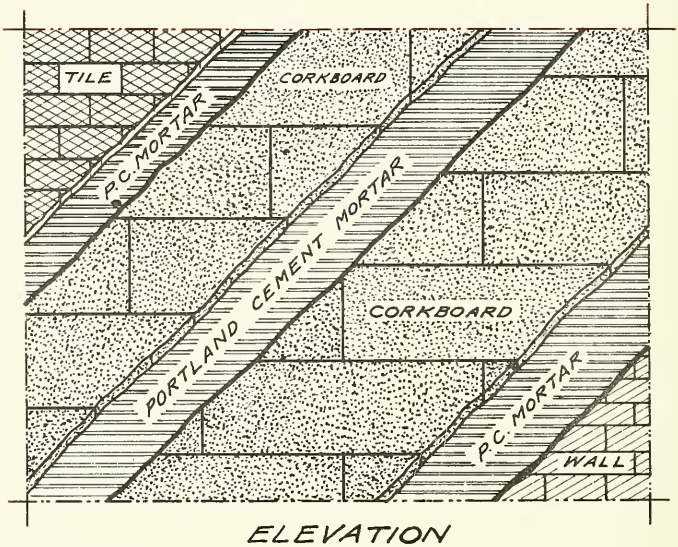
to Brick Concrete or Stone
Cement Plaster Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with ..... inches of ..... corkboard in two courses. The first course is to be ..... inches thick applied with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The second course is to be ..... inches thick applied against the first course with hot asphalt cement and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All vertical joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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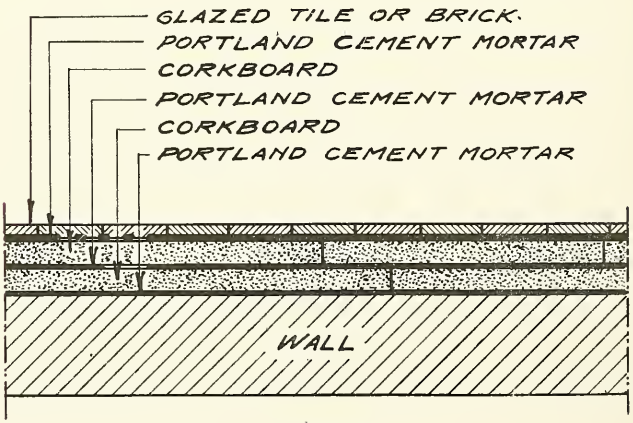


PLAN

No. 6

WALLS—*Masonry*

Two Courses of Corkboard

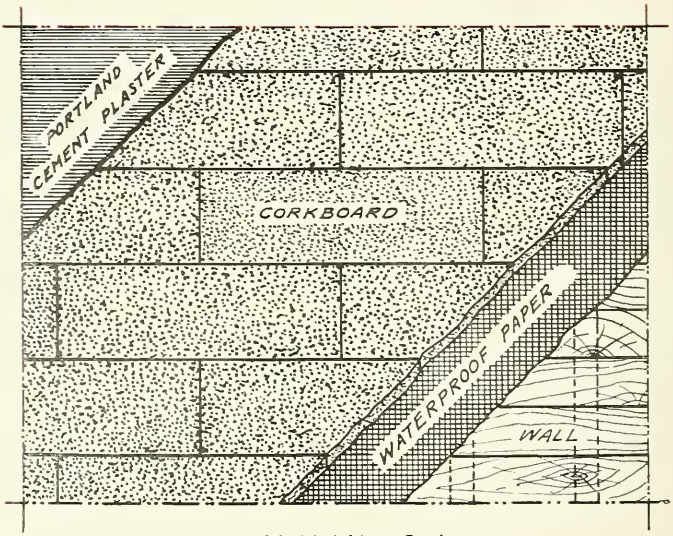
Applied with Cement

to Brick Concrete or Stone
Glazed Tile or Brick Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with ..... inches of ..... corkboard in two courses. The first course is to be ..... inches thick applied with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The second course is to be ..... inches thick applied against the first course with a ½" bed of Portland cement mortar and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All vertical joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to receive an extra heavy coat of Portland cement plaster, mixed one part Portland cement and two parts clean, sharp sand, floated to a reasonably even and true surface and left rough scratched for the glazed tile or brick finish.



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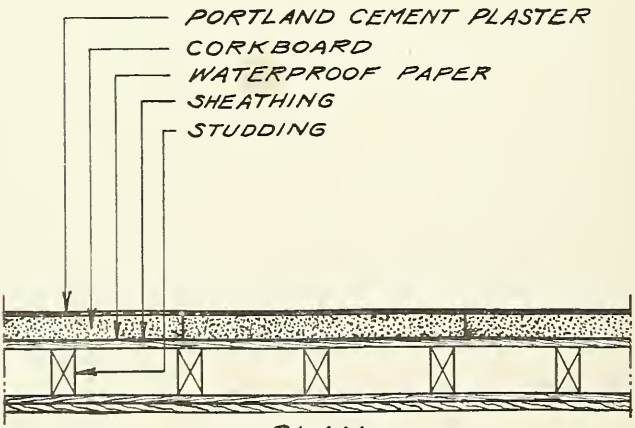


PLAN

No. 7

WALLS—*Frame*

One Course of Corkboard

Nailed to

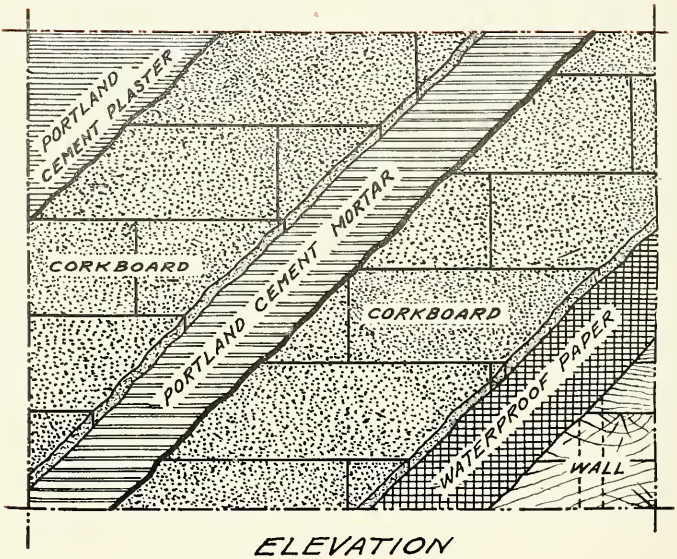
Frame Walls
Cement Plaster Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with two layers of waterproof insulation paper lapped not less than three inches followed by a single course of ..... inch ..... corkboard securely fastened with special galvanized wire nails of proper length. Corkboards are to be butted up close making tight fitting joints and all vertical joints are to be broken. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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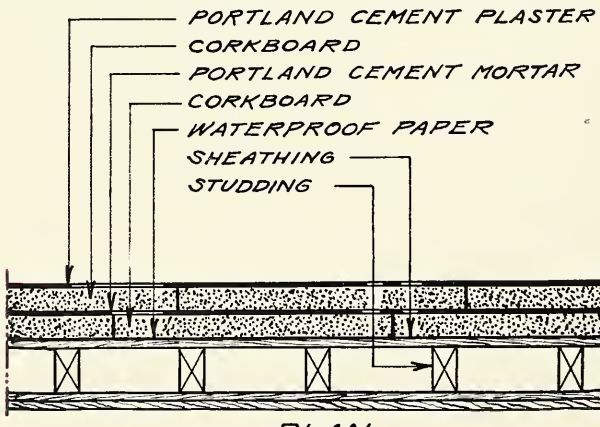


PLAN

No. 8

WALLS—*Frame*

Two Courses of Corkboard

Applied by Nailing and Cement

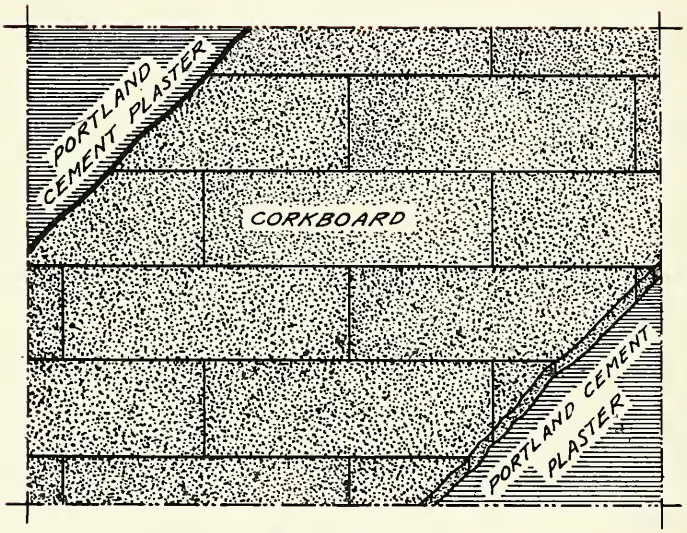
to Frame Walls
Cement Plaster Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The walls are to be insulated with two layers of waterproof paper and ..... inches of ..... corkboard in two courses. Two layers of waterproof paper lapped not less than three inches are to be applied against walls followed by the first course of corkboard ..... inches thick, securely fastened with special galvanized wire nails of proper length. The second course of corkboard ..... inches thick, is to be applied against the first course with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All vertical joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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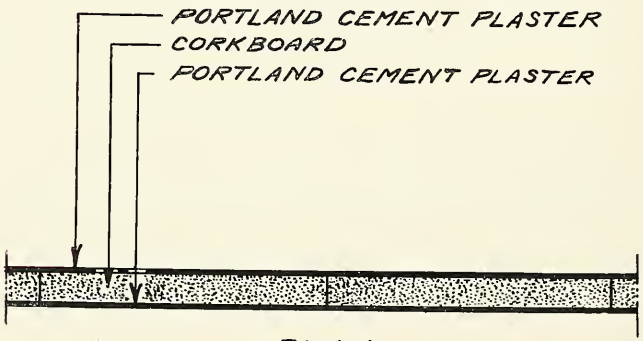


PLAN

No. 9

PARTITIONS—*Cork*

One Course of Corkboard

Self Supported

Cement Plaster Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

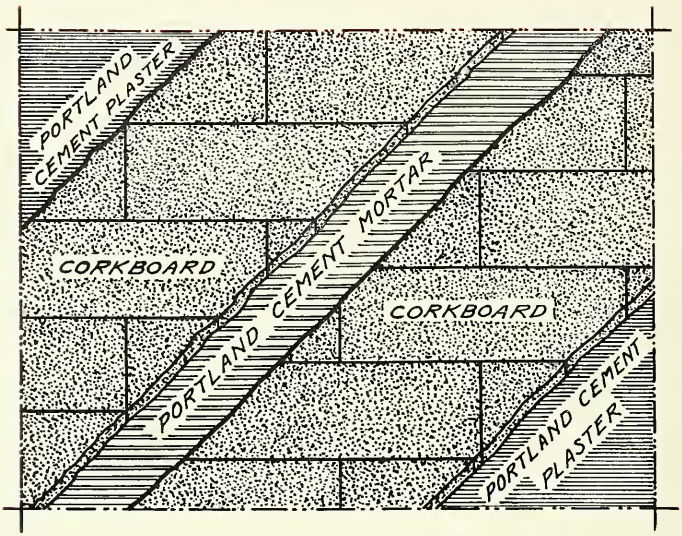
The partitions are to be solid cork and cement, constructed of a single course of ..... inch ..... corkboard erected on edge against temporary studs, securely toenailing each corkboard to adjacent corboards with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints and all vertical joints are to be broken. The exposed cork surface on each side is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

NOTE.—This class of construction is advantageous where no loads are to be carried and may safely be used with satisfactory results

up to 9′ for 2″ Corkboard
" " 12′ " 3″ "
" " 15′ " 4″ "

If additional strength is required, the thickness of the cement plaster finish may be increased to one inch on either side to any height desired.

See note page 53.



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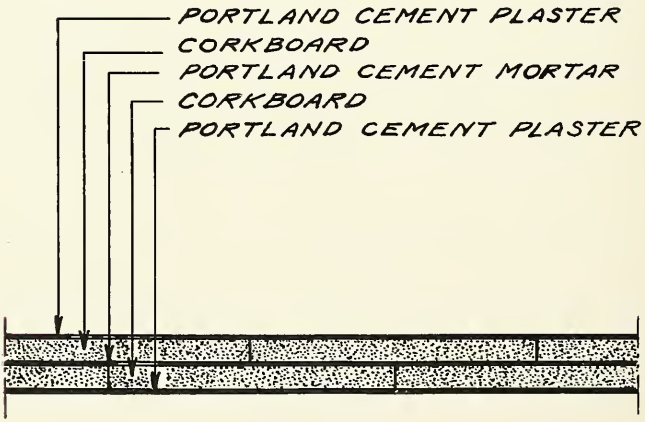


PLAN

No. 10

PARTITIONS—*Cork*

Two Courses of Corkboard

Self Supported

Cement Core

Cement Plaster Finish

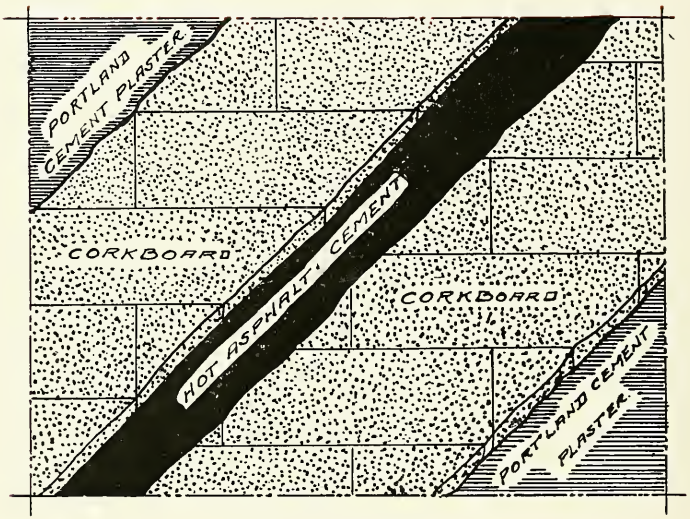
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The partitions are to be solid cork and cement constructed of ..... inches of ..... corkboard in two courses with a Portland cement core between. The first course is to be ..... inches thick erected on edge against temporary studs, securely toenailing each corkboard to adjacent corkboards with wood skewers or special galvanized wire nails of proper length. The second course is to be ..... inches thick erected against the first course with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All vertical joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface on each side is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

NOTE.—This class of construction is advantageous where no loads are to be carried and may be used safely up to twenty-five feet. If additional strength is required, the thickness of the cement plaster finish may be increased to one inch on either side to any height desired.

See note page 53.



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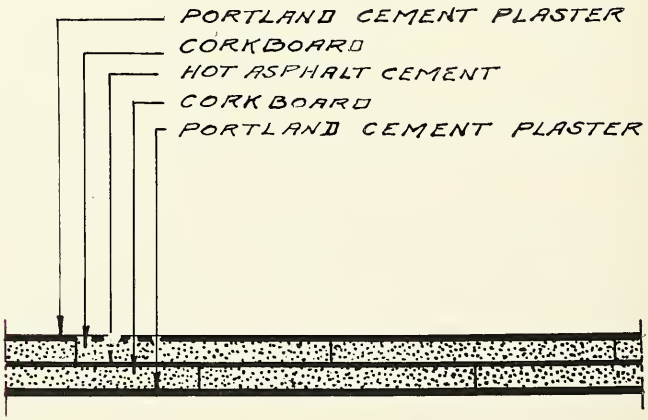


PLAN

No. 11

PARTITIONS—*Cork*

Two Courses of Corkboard

Self Supported
Asphalt cement between courses

Cement Plaster Finish

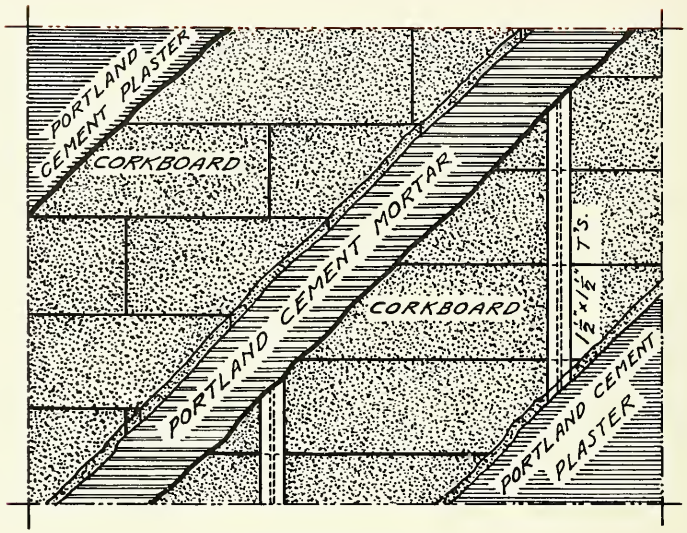
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

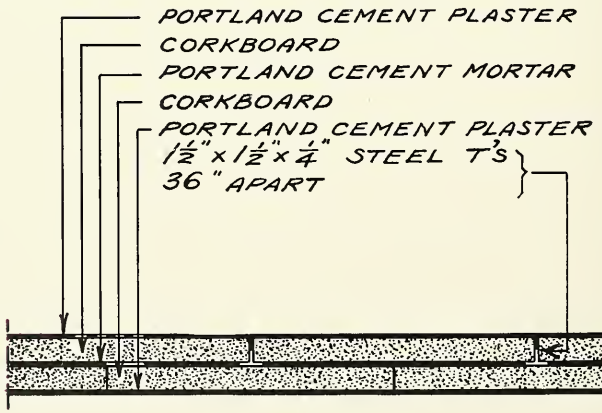
The partitions are to be solid cork and cement constructed of ..... inches of ..... corkboard in two courses with asphalt cement between. The first course is to be ..... inches thick erected on edge against temporary studs, securely toenailing each corkboard to adjacent corkboards with wood skewers or special galvanized wire nails of proper length. The second course is to be ..... inches thick erected against the first course with a heavy bed of hot asphalt cement and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All vertical joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface on each side is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

NOTE.—This class of construction is advantageous where no loads are to be carried and may be used safely up to twenty feet. If additional strength is required the thickness of the cement plaster finish may be increased to one inch on either side to any height required.

See note page 53.



ELEVATION



PLAN

No. 12

PARTITIONS—*Cork*

Two Courses of Corkboard

Steel Supported

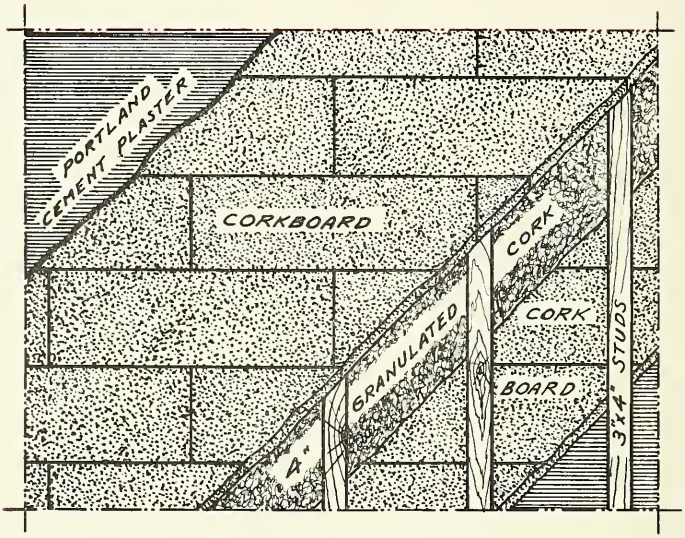
Cement Plaster Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The partition is to be cork and cement, constructed of ..... inches of ..... corkboard in two courses reinforced by steel T's. The first course is to be ..... inches thick erected between 1½" x 1½" x ¼" steel T's placed 36" apart well secured to floor and ceiling. The second course is to be ..... inches thick applied against the first course with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand and additionally secured with wood skewers or galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface on each side is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



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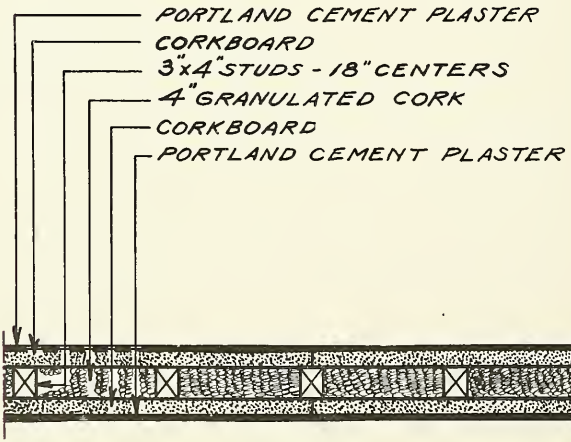


PLAN

No. 13

PARTITIONS—*Cork*

Two Courses of Corkboard

Wood Supported

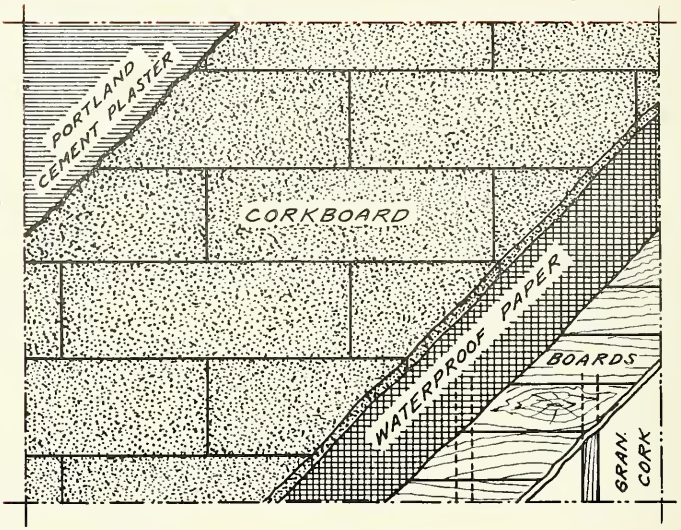
Cement Plaster Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be erected to each side of frame partition according to the following specification:

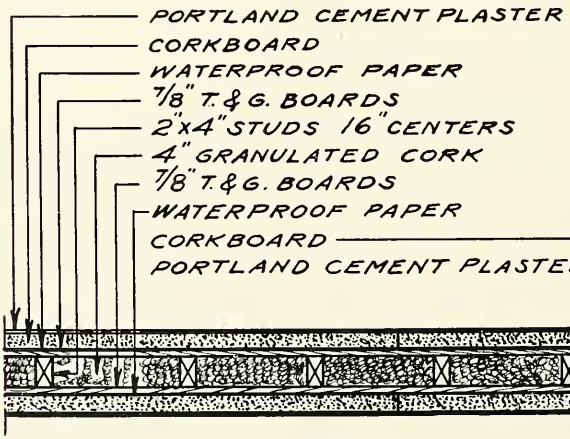
(See page 41 for recommendations of thicknesses.)

The partition is to be constructed by erecting 3″ x 4″ studding at 18″ centers and one course of ..... inch ..... corkboard securely nailed to each side with special galvanized wire nails of proper length. The space between the studding is to be filled with granulated cork well packed in place. Corkboards are to be butted up close making tight fitting joints and all vertical joints are to be staggered. The exposed cork surface on each side is to be finished with approximately ½″ Portland cement plaster applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



ELEVATION



PLAN

No. 14

PARTITIONS—*Frame*

One Course of Corkboard

Nailed against

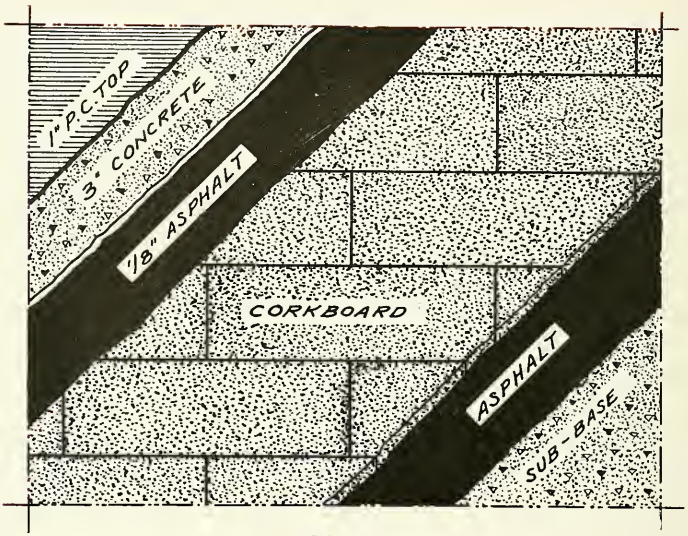
Frame Partition
Cement Plaster Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be erected to each side of frame partition according to the following specification:

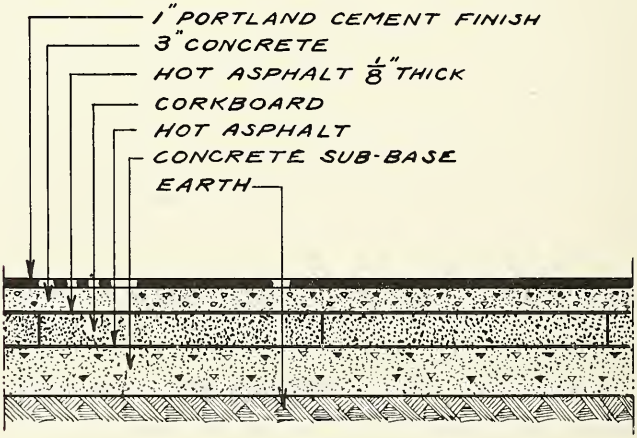
(See page 41 for recommendations of thicknesses.)

The partition is to be constructed by erecting 2″ x 4″ studding at 16″ centers sheathed on each side with T. & G. boards filling the space between studs with granulated cork well packed in place. Each side of the partition is then to receive two courses of waterproof insulation paper lapped not less than three inches followed by a single course of ..... inch ..... corkboard securely fastened with special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints and all vertical joints are to be broken. The exposed cork surface on each side is to be finished with approximately ½″ Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.



PLAN



ELEVATION

No. 15

FLOORS—*Concrete*

One Course of Corkboard

Laid on

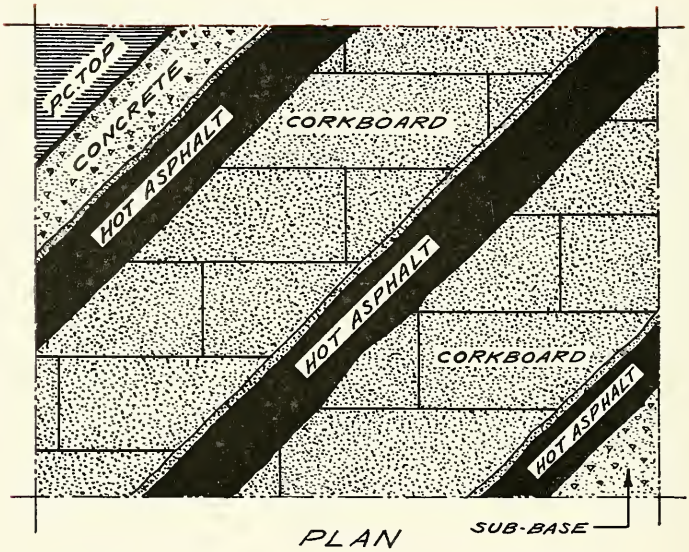
Concrete Base
Concrete and Cement Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be put down according to the following specification:

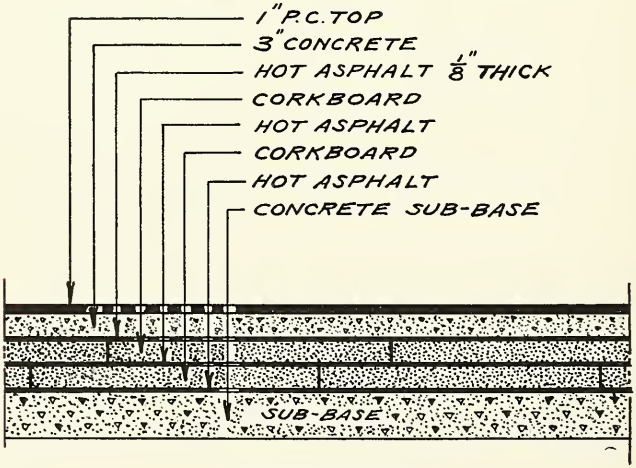
(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with a single course of ..... inch ..... corkboard laid in a heavy mop coat of hot asphalt on a reasonably smooth and level concrete base. (Concrete base to be furnished by Owner). All corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛″ thick thoroughly sealing all joints. The insulation is to be finished with a concrete and cement wearing floor 4″ thick furnished by Owner.

NOTE.—If STAR Corkboard is used a 3″ thick concrete and cement floor will be sufficient for ordinary purposes.



PLAN



ELEVATION

No. 16

FLOORS—*Concrete*

Two Courses of Corkboard

Laid on

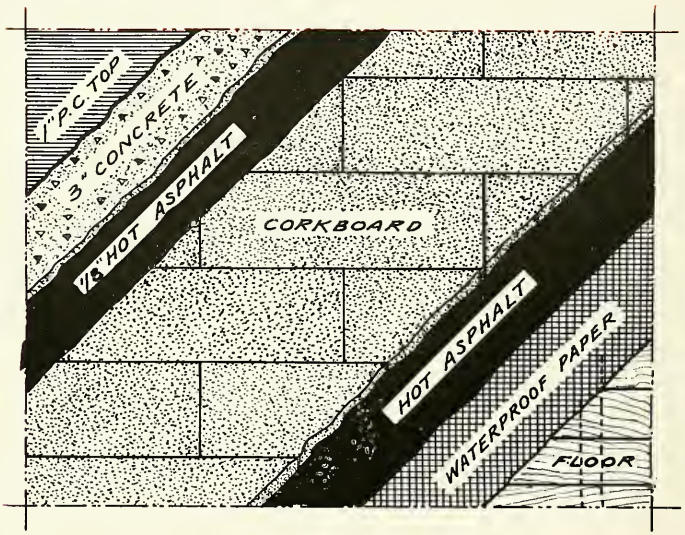
Concrete Foundation
Concrete and Cement Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be put down according to the following specification:

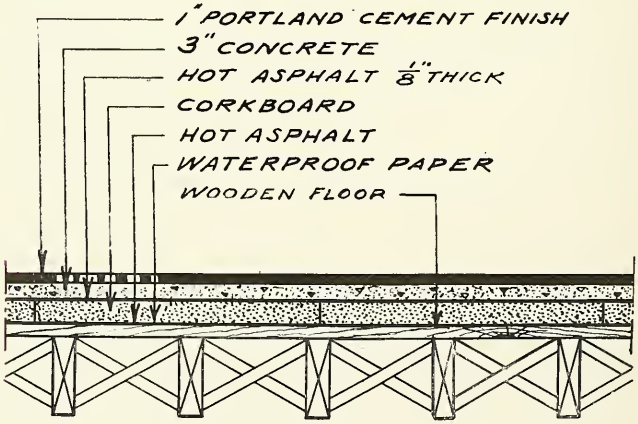
(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with ..... inches of ..... corkboard in two courses laid on a reasonably smooth and even concrete base. (Concrete base to be furnished by Owner). The first course is to be ..... inches thick laid in a heavy mop coat of hot asphalt. The second course is to be ..... inches thick laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛″ thick thoroughly sealing all joints. The insulation is to be finished with a concrete and cement wearing floor 4″ thick furnished by Owner.

NOTE.—If STAR Corkboard is used a 3″ thick concrete and cement floor will be sufficient for ordinary purposes.



PLAN



ELEVATION

No. 17

FLOORS—*Frame*

One Course of Corkboard

Laid on

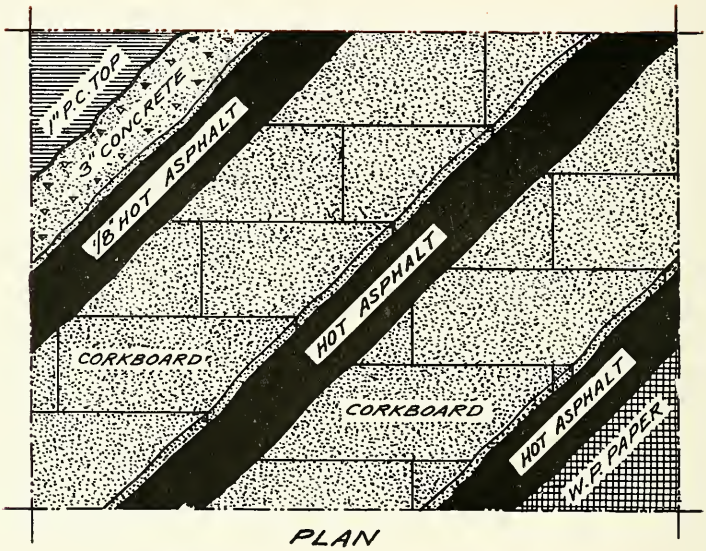
Wood Floor
Concrete and Cement Finish

Two, Three or Four inch STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with one layer of waterproof paper and a single course of ..... inch ..... corkboard laid on the wood floor. (Wood floor to be furnished by Owner). One layer of waterproof paper lapped not less than three inches is to be laid on floor followed by one course of corkboard laid in a heavy mop coat of hot asphalt. Corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛″ thick thoroughly sealing all joints. The insulation is to be finished with a concrete and cement wearing floor 4″ thick furnished by Owner.

NOTE.—If STAR Corkboard is used a 3″ thick concrete and cement floor will be sufficient for ordinary purposes.



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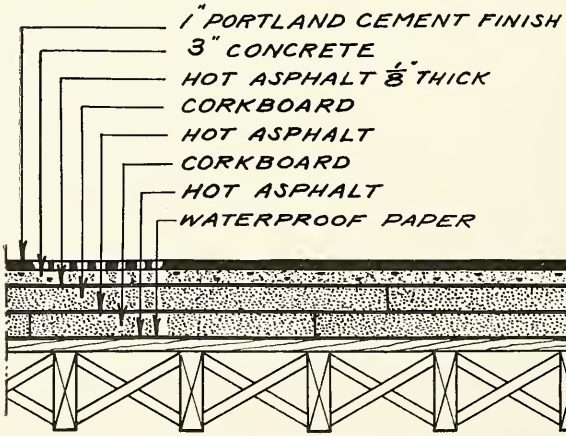


ELEVATION

No. 18

FLOORS—*Frame*

Two Courses of Corkboard

Laid on

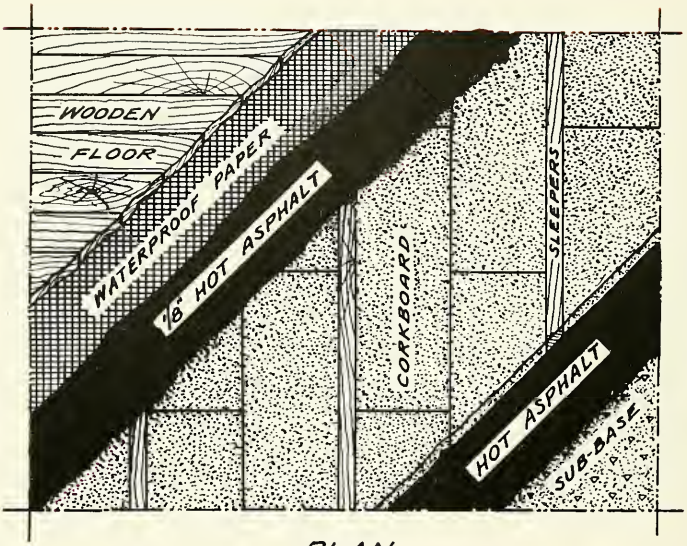
Wood Foundation
Concrete and Cement Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be put down according to the following specification:

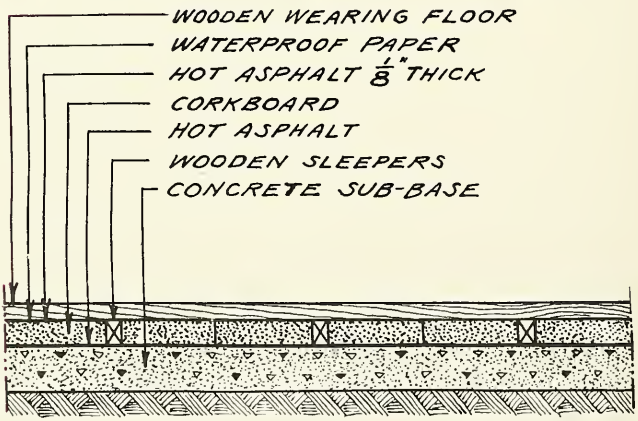
(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with one layer of waterproof paper and ..... inches of ..... corkboard in two courses laid on the wood floor. (Wood floor to be furnished by Owner). One layer of waterproof paper lapped not less than three inches is to be laid on floor followed by the first course of corkboard ..... inches thick laid in a heavy mop coat of hot asphalt. The second course of corkboard ..... inches thick is to be laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛″ thick thoroughly sealing all joints. The insulation is to be finished with a concrete and cement wearing floor 4″ thick furnished by Owner.

NOTE.—If STAR Corkboard is used a 3″ thick concrete and cement floor will be sufficient for ordinary purposes.



PLAN



ELEVATION

No. 19

FLOORS—*Concrete*

One Course of Corkboard

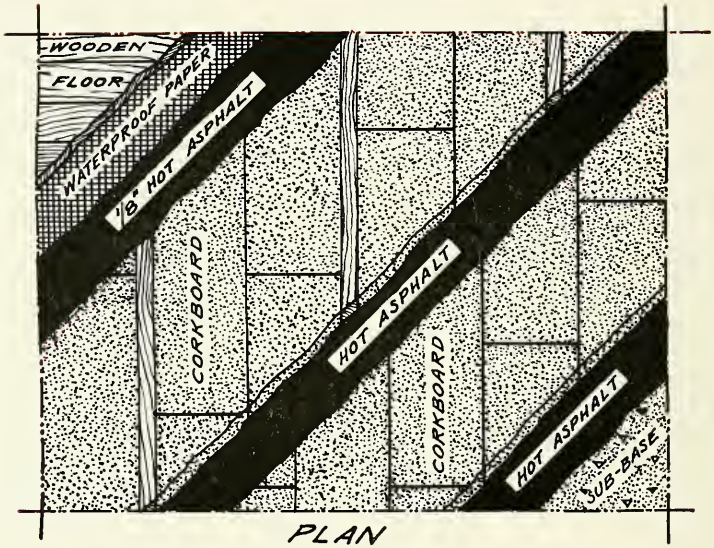
Laid on

Concrete Foundation
Wood Finish

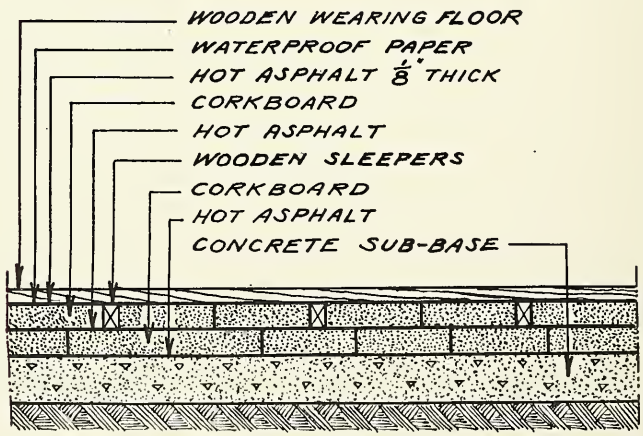
Two, Three or Four inch STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with a single course of ..... inch ..... corkboard laid in a heavy mop coat of hot asphalt on a reasonably smooth and level concrete base. (Concrete base to be furnished by Owner). Corkboards are to be laid between 2" x ....." wood sleepers placed 24" apart. All corkboards and sleepers are to be butted up close making tight fitting joints and all transverse joints are to be broken. The top surface is to be mopped with a coat of hot asphalt not less than ⅛" thick thoroughly sealing all joints. One layer of waterproof insulation paper lapped not less than three inches is to be laid on the cork followed by a wooden wearing floor of ..... securely nailed to the sleepers.



PLAN



ELEVATION

No. 20

FLOORS—*Concrete*

Two Courses of Corkboard

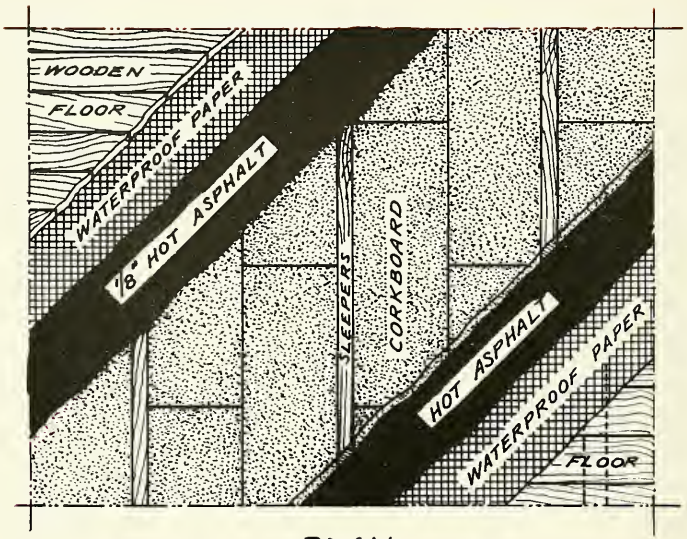
Laid on

Concrete Foundation
Wood Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with ..... inches of ..... corkboard in two courses laid on a reasonably smooth and even concrete base. (Concrete base to be furnished by Owner). The first course is to be ..... inches thick laid in a heavy mop coat of hot asphalt. The second course is to be ..... inches thick laid on the first course in a heavy mop coat of hot asphalt between 2″ x .....″ wood sleepers placed 24″ apart. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛″ thick thoroughly sealing all joints. One layer of waterproof insulation paper lapped not less than three inches is to be laid on the cork followed by a wooden wearing floor of ..... securely nailed to the sleepers.



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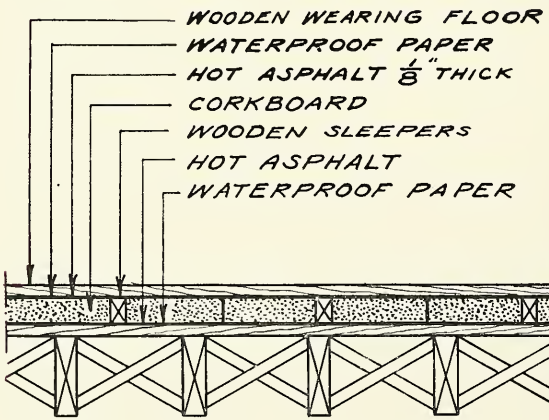


ELEVATION

No. 21

FLOORS—*Frame*

One Course of Corkboard

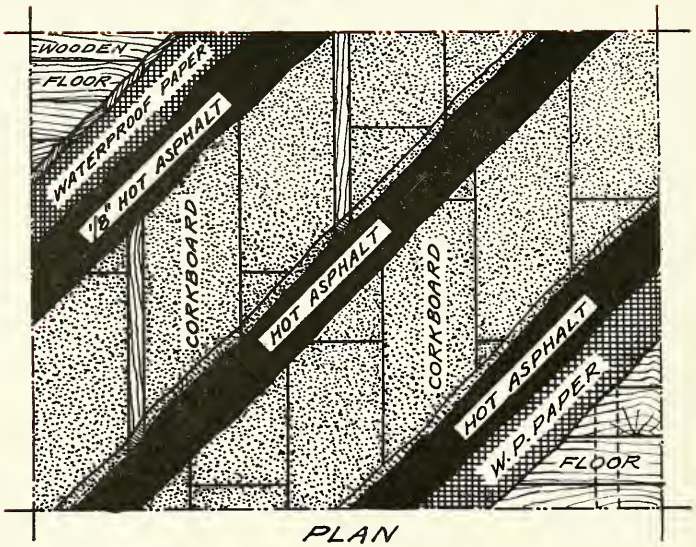
Laid on

Wood Floor
Wood Finish

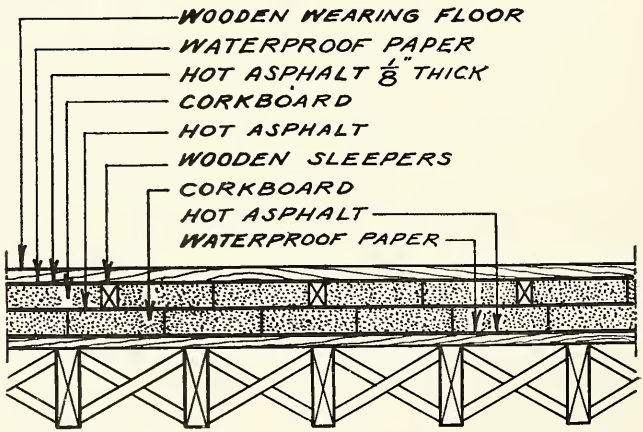
Two, Three or Four inch STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with one layer of waterproof paper and a single course of ..... inch ..... corkboard laid on the wood floor. (Wood floor to be furnished by Owner). One layer of waterproof paper lapped not less than three inches is to be laid on floor followed by one course of corkboard laid in a heavy mop coat of hot asphalt. Corkboards are to be laid between 2" x ....." wood sleepers placed 24" apart. All corkboards and sleepers are to be butted up close making tight fitting joints and all transverse joints are to be broken. The top surface is to be mopped with a coat of hot asphalt not less than 1/8" thick thoroughly sealing the joints. One layer of waterproof paper lapped not less than three inches is to be laid on the cork followed by a wooden wearing floor of ..... securely nailed to the sleepers.



PLAN



ELEVATION

No. 22

FLOORS—*Frame*

Two Courses of Corkboard

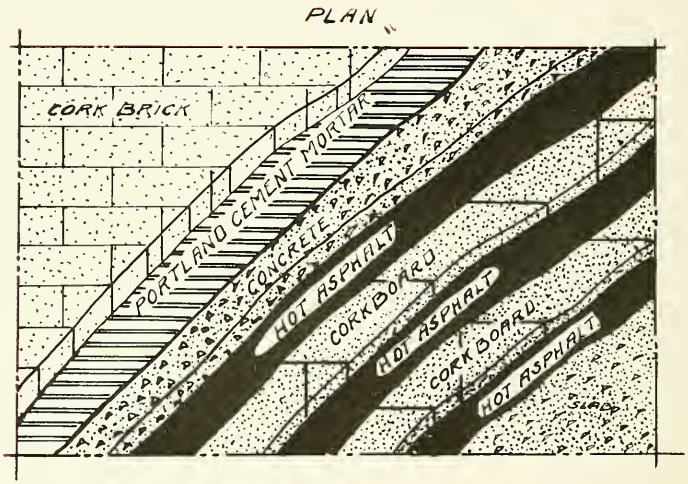
Laid on

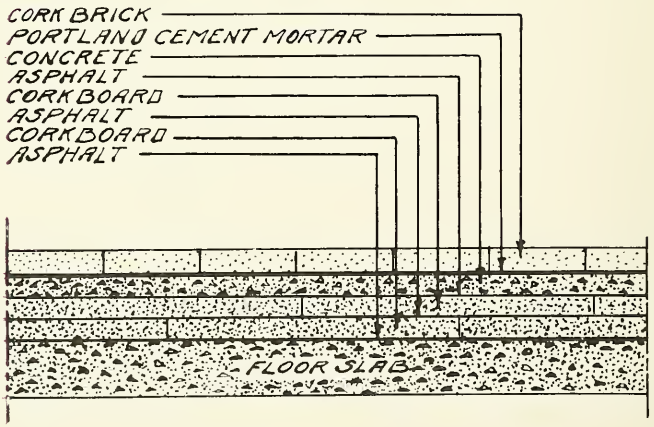
Wood Floor
Wood Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The floor is to be insulated with one layer of waterproof paper and ..... inches of ..... corkboard in two courses laid on the wood floor. (Wood floor to be furnished by Owner). One layer of waterproof paper lapped not less than three inches is to be laid on floor followed by the first course of corkboard ..... inches thick laid in a heavy mop coat of hot asphalt. The second course of corkboard ..... inches thick is to be laid on the first course in a heavy mop coat of hot asphalt between 2″ x ....." wood sleepers placed 24″ apart. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛″ thick thoroughly sealing all joints. One layer of waterproof paper lapped not less than three inches is to be laid on the cork followed by a wooden wearing floor of ..... securely nailed to the sleepers.


PLAN
CORK BRICK
PORTLAND CEMENT MORTAR
CONCRETE
HOT ASPHALT
CORKBOARD
HOT ASPHALT
CORK BOARD
HOT ASPHALT
SLAB


CORK BRICK
PORTLAND CEMENT MORTAR
CONCRETE
ASPHALT
CORKBOARD
ASPHALT
CORKBOARD
ASPHALT
FLOOR SLAB

ELEVATION

No. 23

FLOORS—*Concrete or Frame*

One or Two Courses of Corkboard

Laid in Asphalt

on Concrete or Wood Foundation

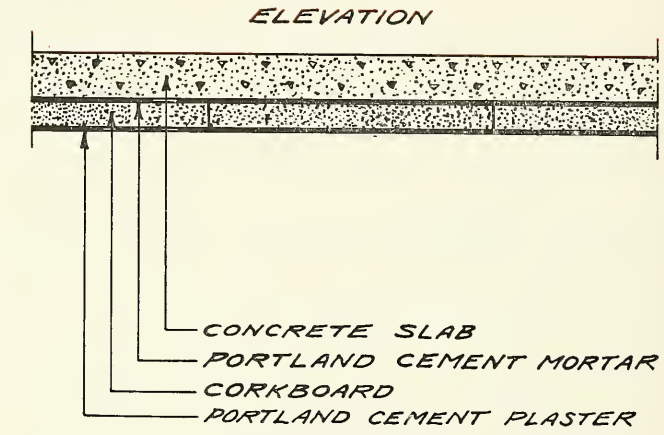
Finished with

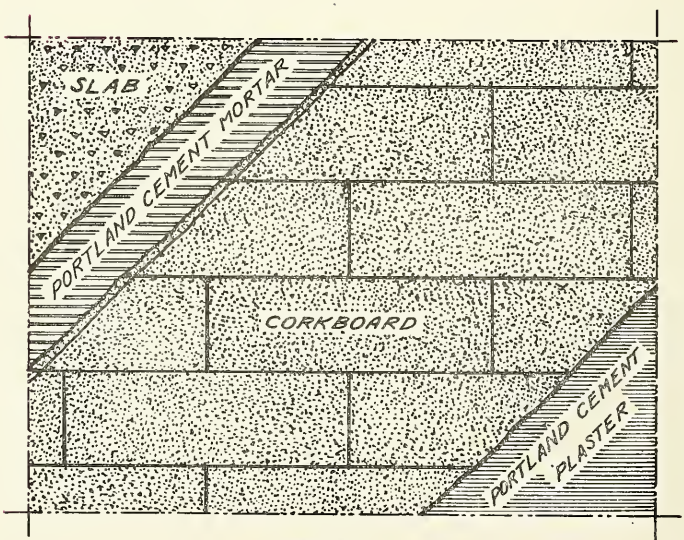
Cork Brick Wearing Floor

Any thickness of STAR or CRESCENT Corkboard laid as per specification Nos. 15, 16, 17, 18, 19, 20, 21 and 22 may be finished according to the following specification:

(See page 41 for recommendations of thicknesses.)

The floor insulation is to be finished with a cork brick wearing floor. A foundation of two inches of concrete mixed one part Portland cement to two parts clean, sharp sand and five parts screened crushed stone or clean gravel is to be put down directly on top of the insulation. The concrete is to be well tamped. The cork brick are to be laid flat on the concrete foundation in a ½" bed of Portland cement mortar, mixed one part Portland cement and two parts clean, sharp sand. All bricks are to be laid up close breaking all transverse joints and the brick tamped in place leaving the top surface reasonably even. All joints between the brick are to be grouted with neat Portland cement mixed thin so it will readily fill the joints. The finished floor is not to be used until the cement is thoroughly set.


ELEVATION
CONCRETE SLAB
PORTLAND CEMENT MORTAR
CORKBOARD
PORTLAND CEMENT PLASTER


SLAB
PORTLAND CEMENT MORTAR
CORKBOARD
PORTLAND CEMENT PLASTER

PLAN

No. 24

CEILINGS—*Masonry*

One Course of Corkboard

Applied with Cement

to Concrete or Brick Ceilings
Cement Plaster Finish

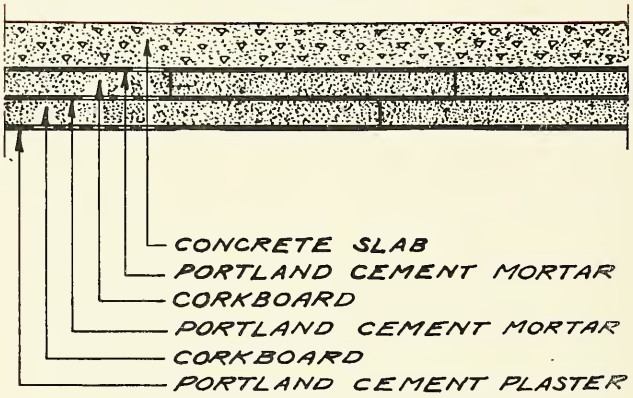
Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

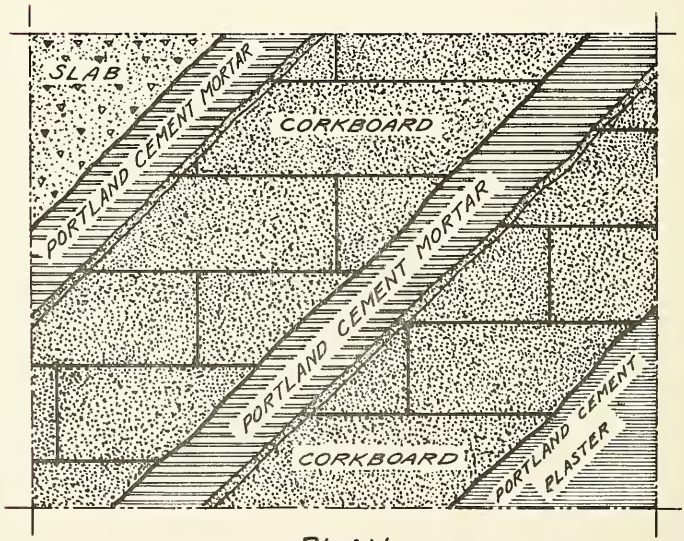
(See page 41 for recommendations of thicknesses.)

The ceiling is to be insulated with a single course of ..... inch..... corkboard applied with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. All corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. Each corkboard is to be shored up with a suitable support firmly holding it against ceiling to insure proper adhesion. The shoring is to be left in place for at least 12 hours, but is not to be removed until the cement mortar is well set. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.

ELEVATION





PLAN

No. 25

CEILINGS—*Masonry*

Two Courses of Corkboard

Applied with Cement

to Concrete or Brick Ceilings
Cement Plaster Finish

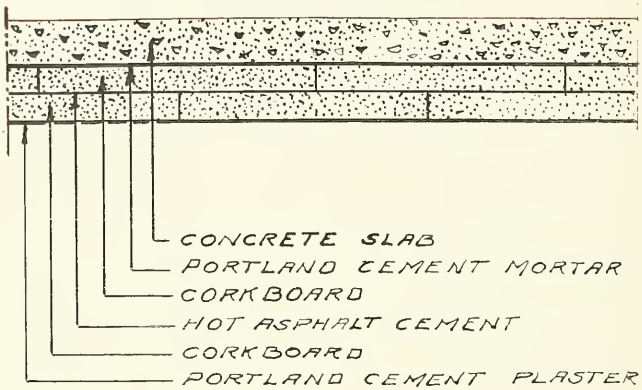
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be applied according to the following specification:

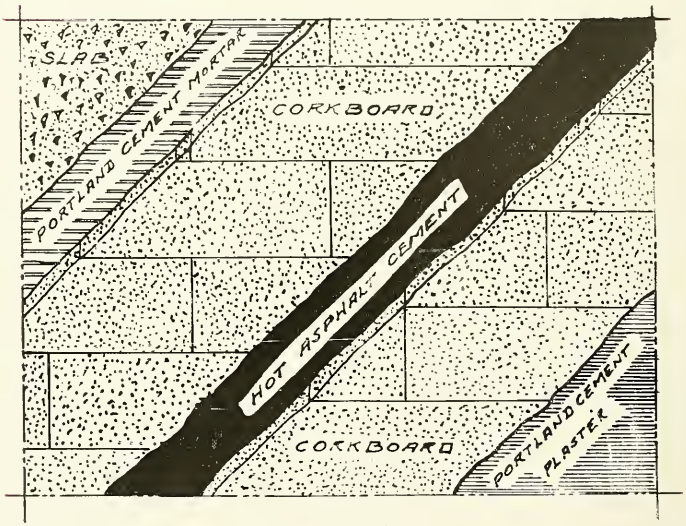
(See page 41 for recommendations of thicknesses.)

The ceiling is to be insulated with ..... inches of ..... corkboard in two courses. The first course is to be ..... inches thick applied with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The second course is to be ..... inches thick applied against the first course with a ½" bed of Portland cement mortar and additionally secured with wood skewers or special galvanized wire nails of proper length. Each corkboard of the first course is to be shored up with a suitable support firmly holding it against ceiling to insure proper adhesion. The shoring is to be left in place for at least 12 hours, but is not to be removed until the cement mortar is well set. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.

ELEVATION





PLAN

No. 26

CEILINGS—*Masonry*

Two Courses of Corkboard

Applied with Cement and Asphalt

to Concrete or Brick
Cement Plaster Finish

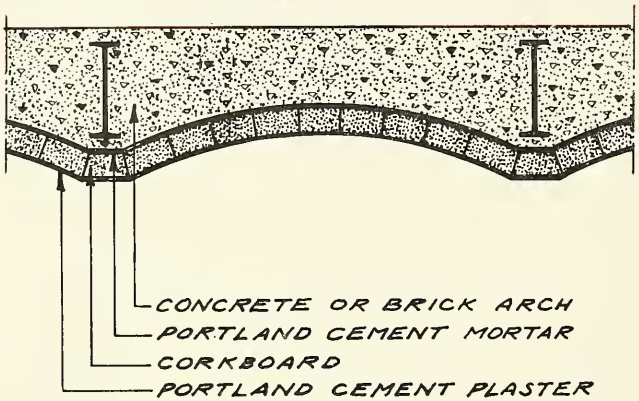
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be applied according to the following specification:

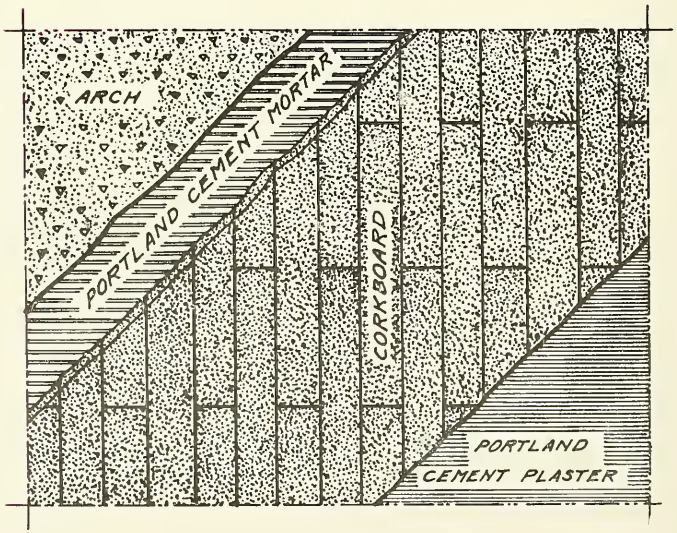
(See page 41 for recommendations of thicknesses.)

The ceiling is to be insulated with ..... inches of ..... corkboard in two courses. The first course is to be ..... inches thick applied with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The second course is to be ..... inches thick applied against the first course with hot asphalt cement and additionally secured with wood skewers or special galvanized wire nails of proper length. Each corkboard of the first course is to be shored up with a suitable support firmly holding it against ceiling to insure proper adhesion. The shoring is to be left in place for at least 12 hours, but is not to be removed until the cement mortar is well set. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.

ELEVATION





PLAN

No. 27

CEILINGS—*Masonry*

One Course of Corkboard

Applied with Cement

to Arched Concrete or Brick Ceilings
Cement Plaster Finish

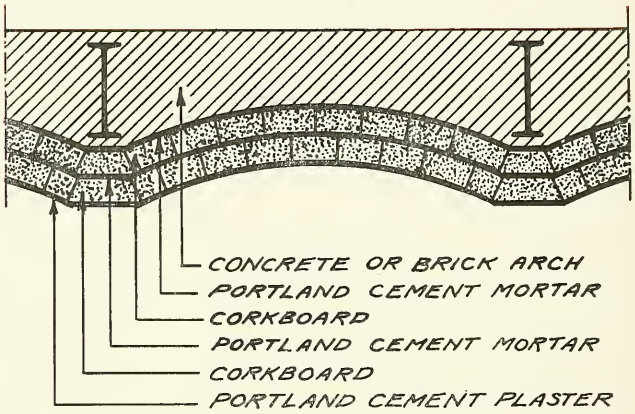
Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

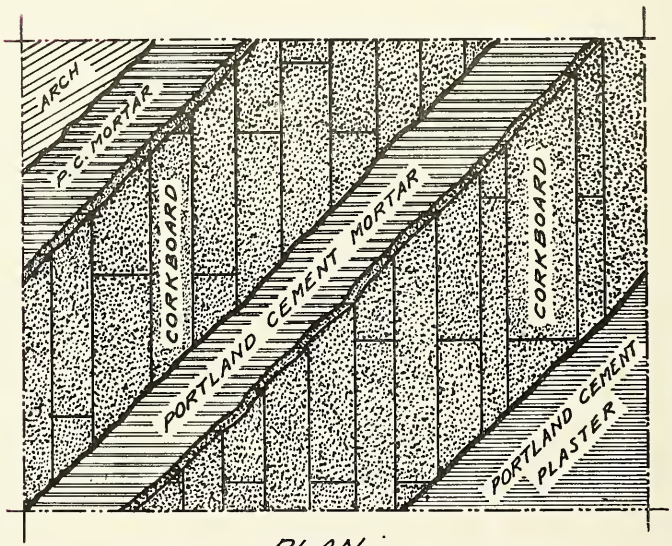
(See page 41 for recommendations of thicknesses.)

The arched ceiling is to be insulated with a single course of ..... inch ..... corkboard applied with a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The sides of the corkboards are to be bevelled to the radius of the arch. All corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. Each corkboard is to be shored up with a suitable support firmly holding it against arches to insure proper adhesion. The shoring is to be left in place for at least 12 hours, but is not to be removed until the cement mortar is well set. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.

ELEVATION





PLAN

No. 28

CEILINGS—*Masonry*

Two Courses of Corkboard

Applied with Cement

to Arched Concrete or Brick Ceilings
Cement Plaster Finish

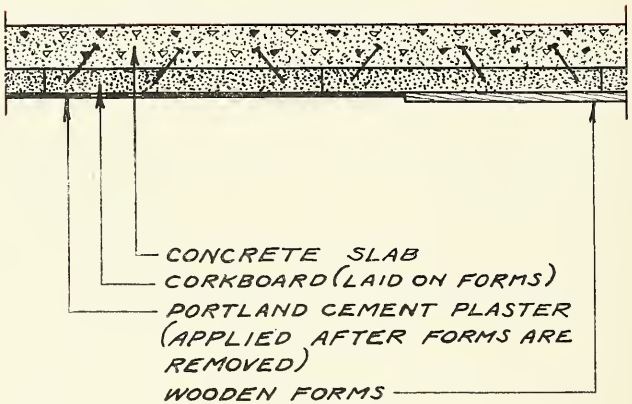
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

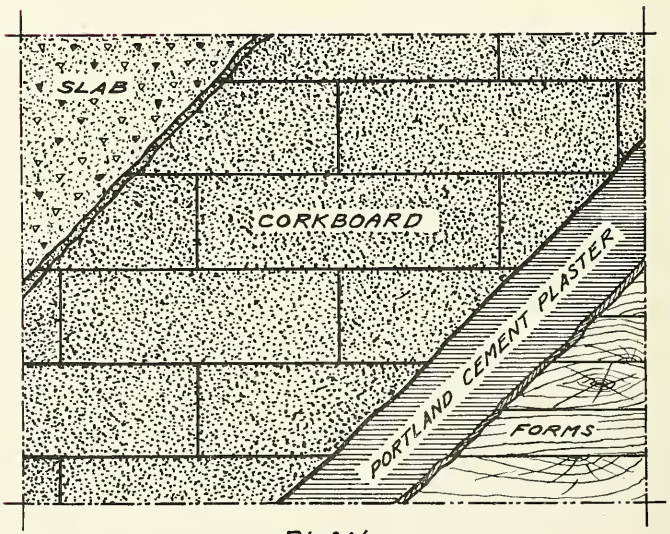
(See page 41 for recommendations of thicknesses.)

The arched ceiling is to be insulated with ..... inches of ..... corkboard in two courses. The first course is to be ..... inches thick applied with a ½" inch bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The second course is to be ..... inches thick applied against the first course with a ½" bed of Portland cement mortar and additionally secured with wood skewers or special galvanized wire nails of proper length. Each corkboard of the first course is to be shored up with a suitable support firmly holding it against ceiling to insure proper adhesion. The shoring is to be left in place for at least 12 hours, but is not to be removed until the cement mortar is well set. The sides of all corkboards are to be bevelled to the radius of the arch. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.

ELEVATION





PLAN

No. 29

CEILINGS—*Concrete*

One Course of Corkboard

Laid in

Ceiling Forms Before Concrete is Poured
Cement Plaster Finish

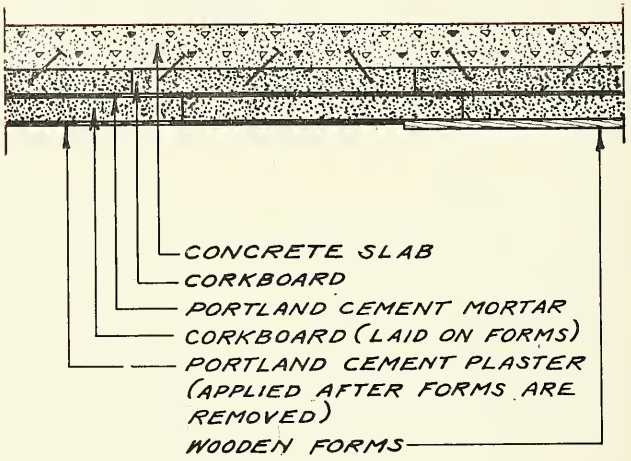
Two, Three or Four inch STAR or CRESCENT Corkboard may be laid according to the following specification:

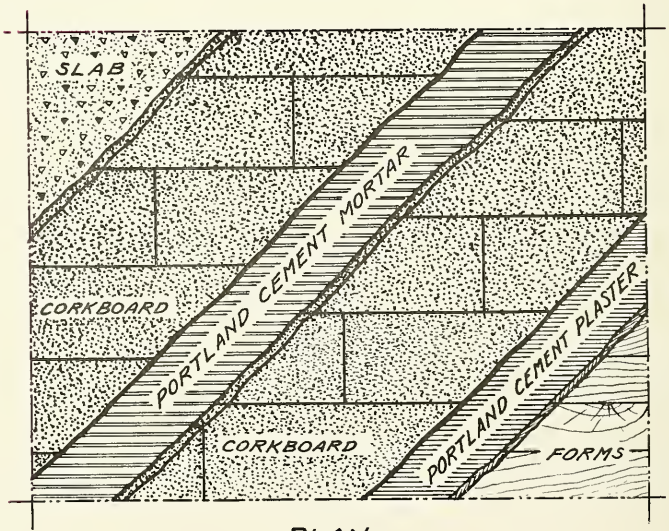
(See page 41 for recommendations of thicknesses.)

The ceiling is to be insulated with a single course of ..... inch ..... corkboard laid dry in ceiling forms. Forms are to be erected by concrete contractor and left ..... inches lower than would otherwise be required. All corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. After the forms are removed the exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.

ELEVATION





PLAN

No. 30

CEILINGS—*Concrete*

Two Courses of Corkboard

Laid in

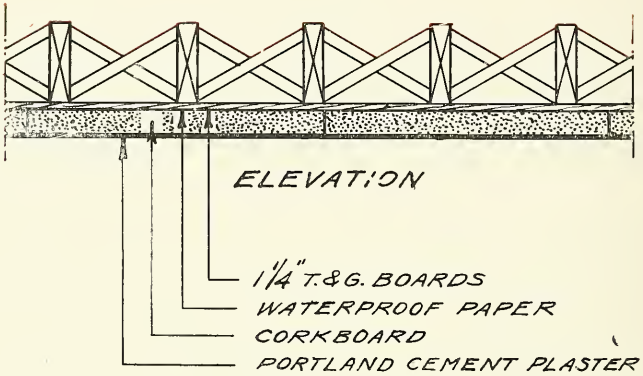
Ceiling Forms Before Concrete is Poured
Cement Plaster Finish

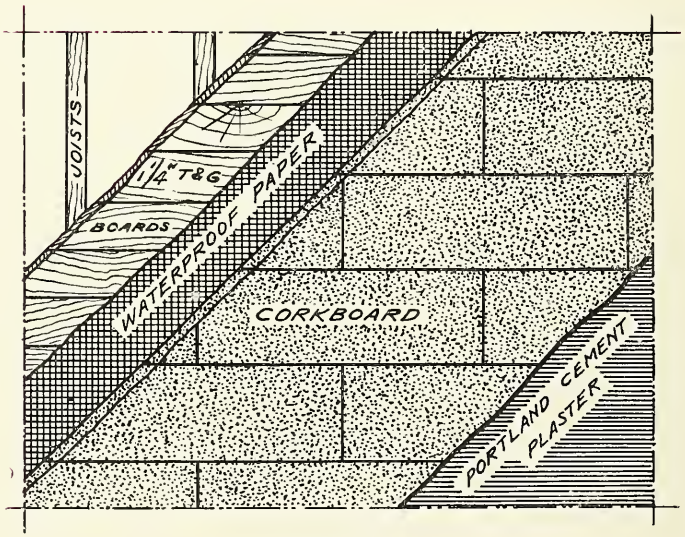
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be laid according to the following specification:

(See page 41 for recommendations of thicknesses.)

The ceiling is to be insulated with ..... inches of ..... corkboard in two courses laid in ceiling forms. Forms are to be erected by concrete contractor and left ..... inches lower than would otherwise be required. The first course is to be ..... inches thick laid dry in the forms. The second course is to be ..... inches thick laid on the first course in a ½" bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand. The two courses are to be securely nailed to each other with wood skewers or special galvanized wire nails of proper length, using not less than two nails to each square foot. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. After the forms are removed the exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.


ELEVATION
1¼" T.&G. BOARDS
WATERPROOF PAPER
CORKBOARD
PORTLAND CEMENT PLASTER


JOISTS
1¼" T&G
BOARDS
WATERPROOF PAPER
CORKBOARD
PORTLAND CEMENT
PLASTER

PLAN

No. 31

CEILINGS—*Frame*

One Course of Corkboard

Nailed to

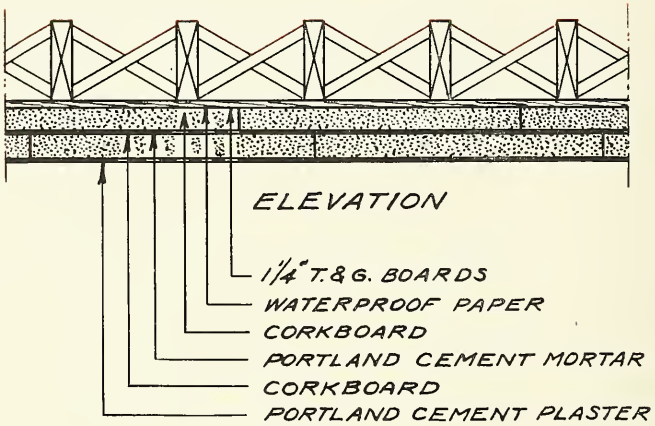
Frame Ceiling
Cement Plaster Finish

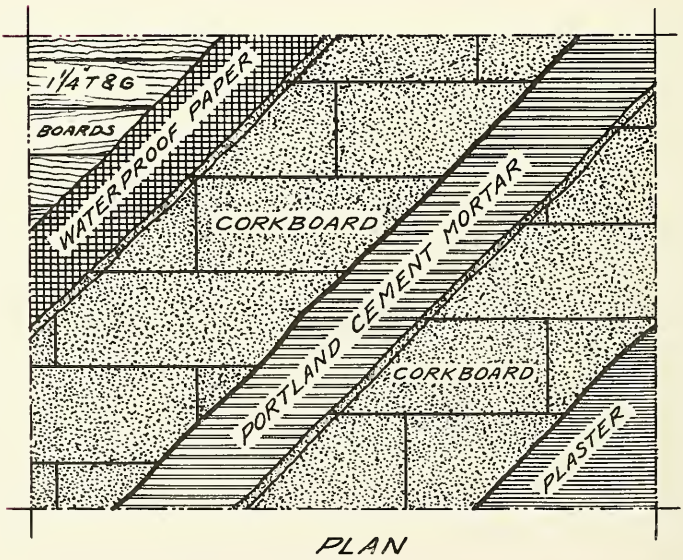
Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The sheathed ceiling is to be insulated with two layers of waterproof insulation paper lapped not less than three inches followed by a single course of ..... inch ..... corkboard securely fastened with special galvanized wire nails of proper length driven through No. 22 galvanized iron discs 1¼" diameter. All corkboards are to butted up close making tight fitting joints and all transverse joints are to be broken. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.


ELEVATION
1¼" T. & G. BOARDS
WATERPROOF PAPER
CORKBOARD
PORTLAND CEMENT MORTAR
CORKBOARD
PORTLAND CEMENT PLASTER


1¼" T & G
BOARDS
WATERPROOF PAPER
CORKBOARD
PORTLAND CEMENT MORTAR
CORKBOARD
PLASTER

PLAN

No. 32

CEILINGS—*Frame*

Two Courses of Corkboard

Applied by Nailing and Cement

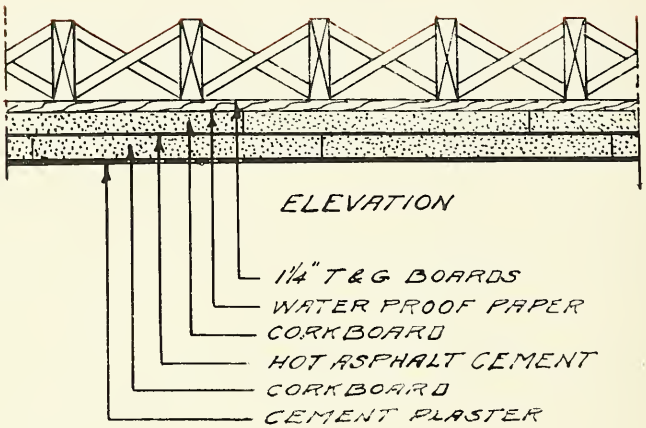
to Frame Ceilings
Cement Plaster Finish

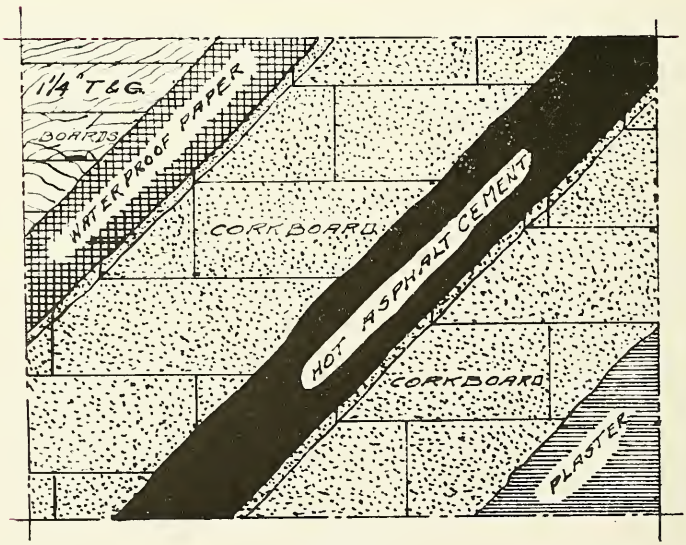
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The sheathed ceiling is to be insulated with two layers of waterproof insulation paper and ..... inches of ..... corkboard in two courses. The two layers of paper lapped not less than three inches are to be applied against sheathing followed by the first course of corkboard ..... inches thick, securely fastened with special galvanized wire nails of proper length driven through No. 22 galvanized iron discs 1¼″ in diameter. The second course of corkboard ..... inches thick, is to be applied against the first course with a ½″ bed of Portland cement mortar, mixed one part cement and two parts clean, sharp sand and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½″ Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.


ELEVATION
1¼" T&G BOARDS
WATER PROOF PAPER
CORKBOARD
HOT ASPHALT CEMENT
CORKBOARD
CEMENT PLASTER


1¼" T&G
BOARDS
WATER PROOF PAPER
CORKBOARD
HOT ASPHALT CEMENT
CORKBOARD
PLASTER

PLAN.

No. 33

CEILINGS—*Frame*

Two Courses of Corkboard

Applied by Nailing and Asphalt Cement

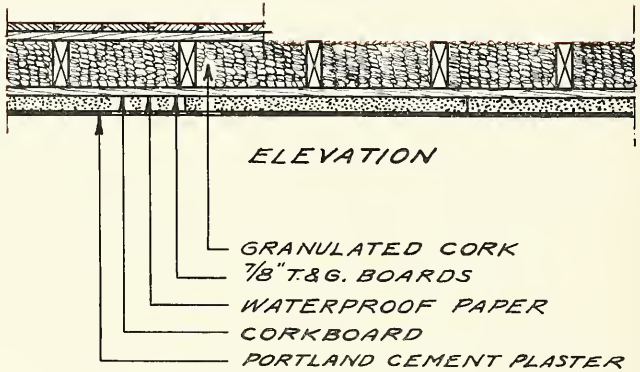
to Frame Ceilings
Cement Plaster Finish

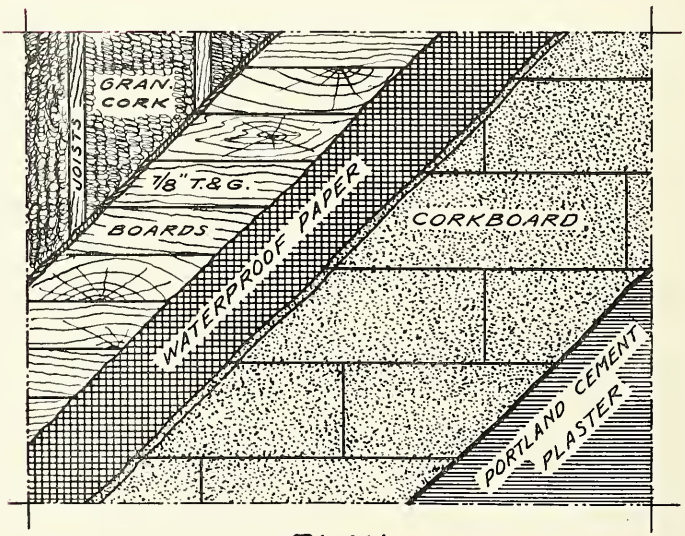
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

The sheathed ceiling is to be insulated with two layers of waterproof insulation paper and ..... inches of ..... corkboard in two courses. The two layers of paper lapped not less than three inches are to be applied against sheathing followed by the first course of corkboard ..... inches thick securely fastened with galvanized wire nails of proper length driven through No. 22 galvanized iron discs 1¼" in diameter. The second course of corkboard ..... inches thick is to be applied against the first course with hot asphalt cement and additionally secured with wood skewers or special galvanized wire nails of proper length. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.


ELEVATION
GRANULATED CORK
7/8" T.&G. BOARDS
WATERPROOF PAPER
CORKBOARD
PORTLAND CEMENT PLASTER


GRAN. CORK
JOISTS
7/8" T.&G. BOARDS
WATERPROOF PAPER
CORKBOARD
PORTLAND CEMENT PLASTER

PLAN

No. 34

CEILINGS—*Frame*

Granulated Cork and One Course of Corkboard

Applied to

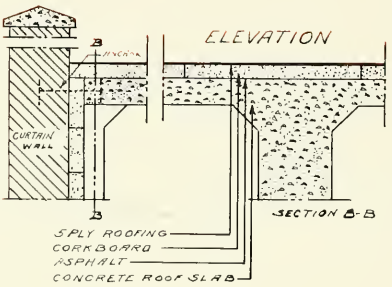
Frame Ceilings
Cement Plaster Finish

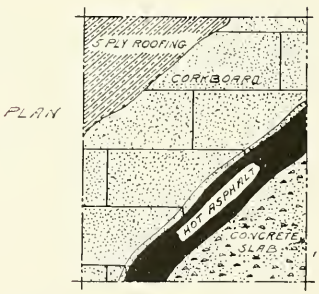
Two, Three or Four inch STAR or CRESCENT Corkboard with granulated cork filling may be erected according to the following specification:

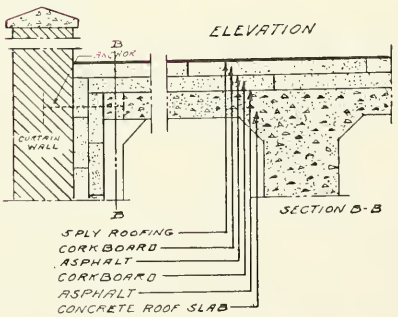
(See page 41 for recommendations of thicknesses.)

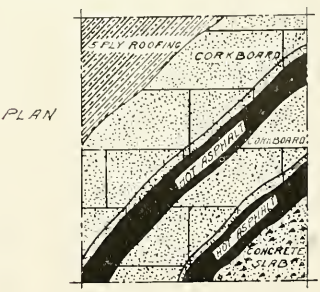
The ceiling is to be insulated with granulated cork filling and one course of ..... inch ..... corkboard. The underside of ceiling beams are to be sheathed with one course of 7/8" T & G boards and the spaces between beams are to be filled with granulated cork well packed in place. Two layers of waterproof insulation paper lapped not less than three inches are to be applied to sheathing followed by a single course of ..... inch corkboard securely fastened with special galvanized wire nails of proper length driven through No. 22 galvanized iron discs 1¼" in diameter. All corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet.

See note page 53.


ELEVATION
B
ANCHOR
CURTAIN WALL
B
SECTION B-B
5 PLY ROOFING
CORKBOARD
ASPHALT
CONCRETE ROOF SLAB


PLAN
5 PLY ROOFING
CORKBOARD
HOT ASPHALT
CONCRETE SLAB


ELEVATION
B
ANCHOR
CURTAIN WALL
B
SECTION B-B
5 PLY ROOFING
CORKBOARD
ASPHALT
CORKBOARD
ASPHALT
CONCRETE ROOF SLAB


PLAN
5 PLY ROOFING
CORKBOARD
HOT ASPHALT
CORKBOARD
HOT ASPHALT
CONCRETE SLAB

No. 35

ROOFS—*Concrete*

One Course of Corkboard

Laid on

Concrete Roof Slab

Two, Three or Four inch STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The roof is to be insulated with a single course of ..... inch ..... corkboard laid in a heavy mop coat of hot asphalt on the concrete roof slab left reasonably smooth and even by the concrete contractor. All corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. The insulation is to be finished with a five ply felt roofing laid directly on top of corkboard by roofing contractor.

No. 36

ROOFS—*Concrete*

Two Courses of Corkboard

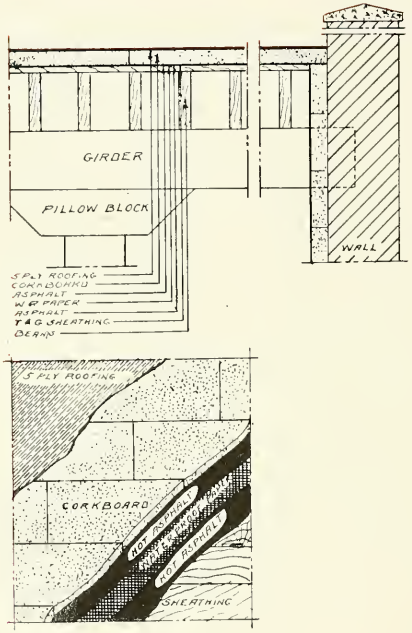
Laid on

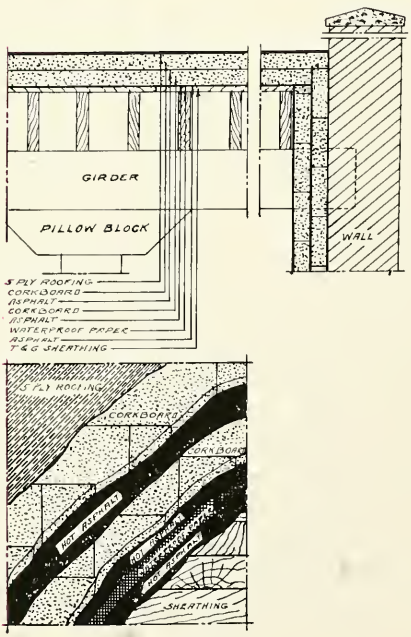
Concrete Roof Slab

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The roof is to be insulated with ..... inches of ..... corkboard in two courses laid on the concrete roof slab left reasonably smooth and even by the concrete contractor. The first course is to be ..... inches thick laid in a heavy mop coat of hot asphalt. The second course is to be ..... inches thick laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The insulation is to be finished with a five ply felt roofing laid directly on top of corkboard by roofing contractor.


GIRDER
PILLOW BLOCK
WALL
5 PLY ROOFING
CORKBOARD
ASPHALT
W.P. PAPER
ASPHALT
T & G SHEATHING
BEAM
5 PLY ROOFING
CORKBOARD
H.P. ASPHALT
WATERPROOF PAPER
H.P. ASPHALT
SHEATHING


GIRDER
PILLOW BLOCK
WALL
5 PLY ROOFING
CORKBOARD
ASPHALT
CORKBOARD
ASPHALT
WATERPROOF PAPER
ASPHALT
T & G SHEATHING
5 PLY ROOFING
CORKBOARD
H.P. ASPHALT
WATERPROOF PAPER
H.P. ASPHALT
SHEATHING

No. 37

ROOFS—*Frame*

One Course of Corkboard
Laid on
Frame Roof

Two, Three or Four inch STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

The roof is to be insulated with one layer of waterproof paper and a single course of ..... inch ..... corkboard. One layer of waterproof paper lapped not less than three inches is to be laid on roof boards in hot asphalt followed by one course of corkboard laid in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints and all transverse joints are to be broken. The insulation is to be finished with a five ply felt roofing laid directly on top of corkboard by roofing contractor.

No. 38

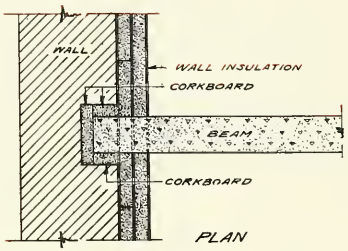
ROOFS—*Frame*

Two Courses of Corkboard
Laid on
Frame Roof

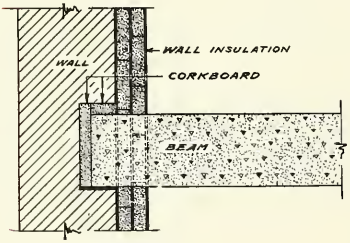
Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard may be put down according to the following specification:

(See page 41 for recommendations of thicknesses.)

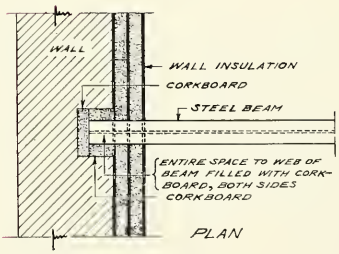
The roof is to be insulated with one layer of waterproof paper and ..... inches of ..... corkboard in two courses. One layer of waterproof paper lapped not less than three inches is to be laid on roof boards in hot asphalt followed by the first course of corkboard ..... inches thick laid in a heavy mop coat of hot asphalt. The second course of corkboard ..... inches thick is to be laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The insulation is to be finished with a five ply felt roofing laid directly on top of corkboard by roofing contractor.



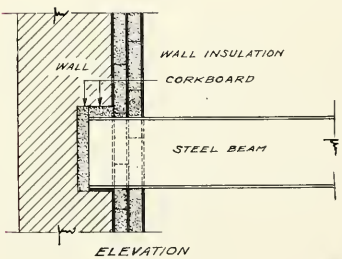
PLAN



ELEVATION



PLAN



ELEVATION

No. 39

BEAMS and GIRDERS—*Concrete or Steel*

One Course of Corkboard

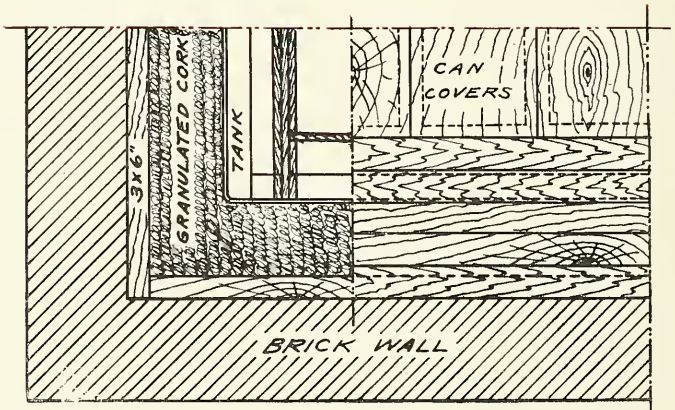
Applied to

Ends of Beams or Girders Extending into Walls

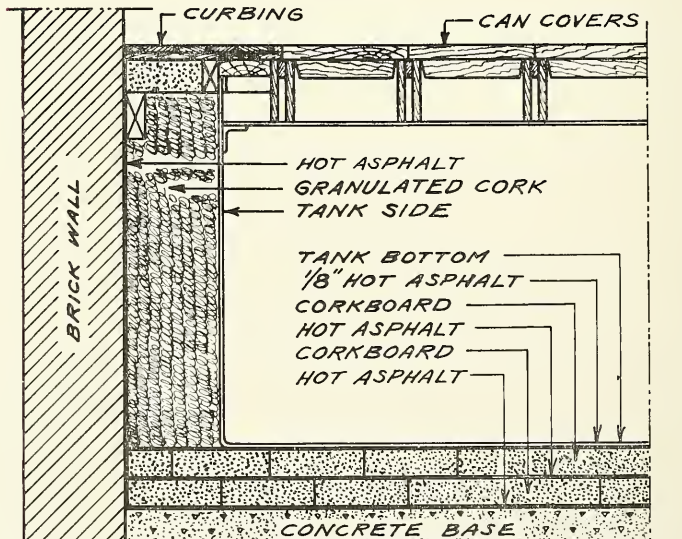
Two, Three or Four inch STAR or CRESCENT Corkboard may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

All beams and girders extending into the building walls are to be insulated on the ends, tops and sides with one course of ..... inch ..... corkboard cut accurately to make tight fitting joints and extend beyond the inside face of wall so that the wall insulation will butt up tightly against it. The insulation contractor is to furnish the corkboard required for this purpose, but the cork is to be installed by the general contractor.



PLAN



ELEVATION

No. 40

FREEZING TANKS

On Wood Floor or Concrete Foundation

Two Courses of Corkboard under Bottom and Granulated Cork on Sides

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard and any thickness of granulated cork may be erected according to the following specification:

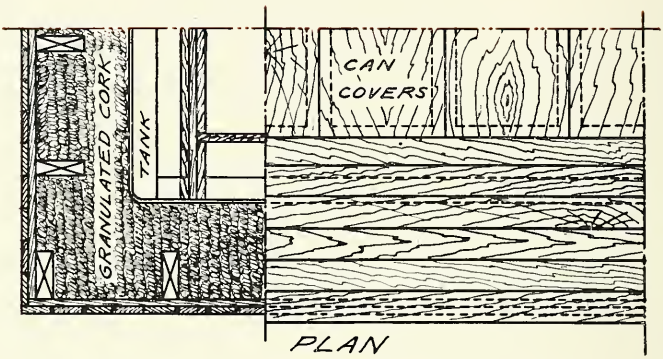
(See page 41 for recommendations of thicknesses.)

BOTTOM:

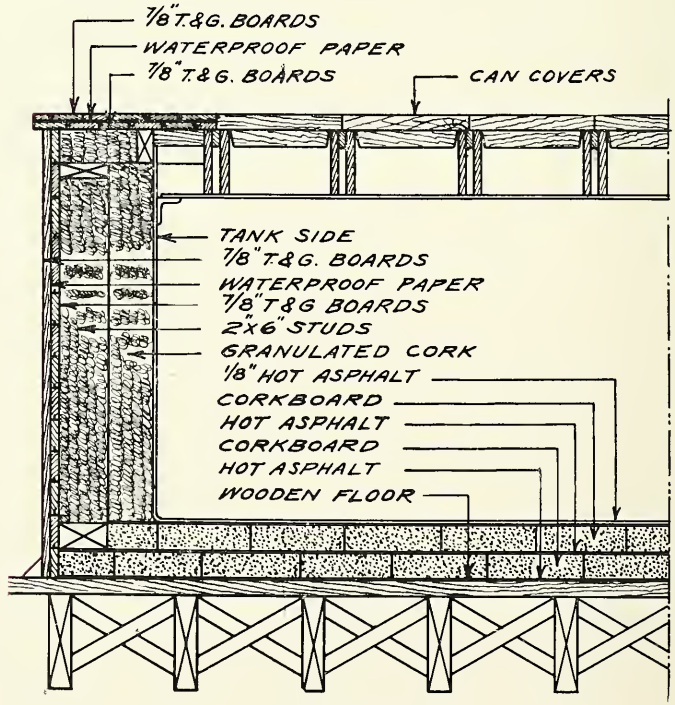
The bottom of the tank is to be insulated with ..... inches of ..... corkboard in two courses laid on a reasonably smooth and even foundation. (Foundation to be furnished by Owner.) The first course is to be ..... inches thick laid in a heavy mop coat of hot asphalt. The second course is to be ..... inches thick laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than 1/8" thick thoroughly sealing all joints ready for the tank to be placed on top. This insulation is to be extended to the outside of the insulation on the sides of the tank.

SIDES:

The sides of the tank adjacent to building walls are to be insulated by filling in the ..... inch space between the tank and the walls with granulated cork well packed in place. The building walls are to be waterproofed with a heavy coat of hot asphalt to the full height of the tank leaving no unprotected places. The top of granulated cork all around the tank is to be covered with a single course of ..... inch ..... corkboard carefully fitted between the tank and the building walls and the top surface coated with hot asphalt thoroughly sealing all joints. The top of the insulation all around the tank is to be protected by a curbing consisting of two courses of 7/8" T & G boards with two courses of waterproof insulation paper between laid on properly supported framing so that the top surface of curbing is flush with the ice can covers. The curbing is to extend from the outside of insulation to the ice can covers.



PLAN



ELEVATION

No. 41

FREEZING TANKS

On Wood Floor or Concrete Foundation

Two Courses of Corkboard under Bottom and Granulated Cork on Sides

Wood Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard and any thickness of granulated cork may be erected according to the following specification:

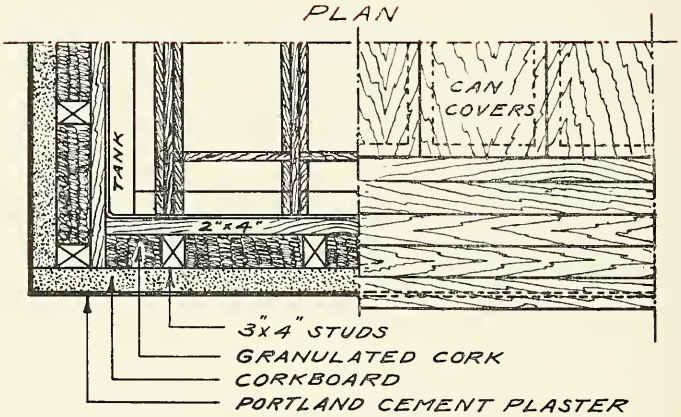
(See page 41 for recommendations of thicknesses.)

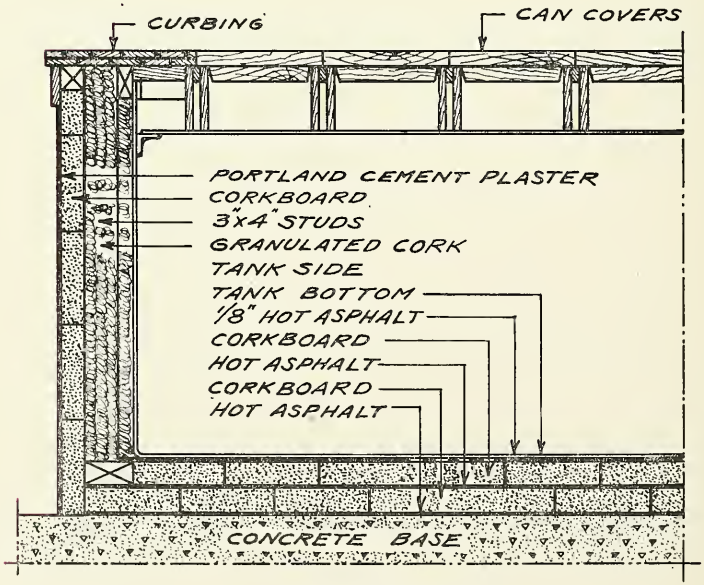
BOTTOM:

The bottom of the tank is to be insulated with ..... inches of ..... corkboard in two courses laid on a reasonably smooth and even foundation. (Foundation to be furnished by Owner.) The first course is to be ..... inches thick laid in a heavy mop coat of hot asphalt. The second course is to be ..... inches thick laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛" thick thoroughly sealing all joints ready for the tank to be placed on top. This insulation is to be extended to the outside of the insulation on the sides of the tank.

SIDES:

The sides of the tank are to be insulated with ..... inches of granulated cork well packed in between tank and retaining walls constructed of 2" x 6" studs at 16" centers placed ..... inches away from the sides of the tank. The studding is to be sheathed on outside with two courses of ⅞" T & G boards with two layers of waterproof insulation paper between, lapping the paper not less than three inches. The first course of T & G boards is to be erected horizontally and the second course vertically. The studs are to be nailed to a 2 x 6 plate at the bottom and are to be substantially secured to the top of the tank with suitable framing. The top of insulation all around the tank is to be protected by a curbing consisting of two courses of ⅞" T & G boards with two layers of waterproof insulation paper between laid on properly supported framing so that the top surface of curbing is flush with the ice can covers. The curbing is to extend from the outside of the insulation to the ice can covers.


PLAN
TANK
CAN COVERS
2"x4"
3"x4" STUDS
GRANULATED CORK
CORKBOARD
PORTLAND CEMENT PLASTER


CURBING
CAN COVERS
PORTLAND CEMENT PLASTER
CORKBOARD
3"x4" STUDS
GRANULATED CORK
TANK SIDE
TANK BOTTOM
1/8" HOT ASPHALT
CORKBOARD
HOT ASPHALT
CORKBOARD
HOT ASPHALT
CONCRETE BASE

ELEVATION

No. 42

FREEZING TANKS

On Wood Floor or Concrete Foundation

Two Courses of Corkboard under Bottom and One Course of Corkboard and Granulated Cork on Sides

Cement Plaster Finish

Two, Three or Four inch STAR or CRESCENT Corkboard and 4" or 6" of granulated cork may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

BOTTOM:

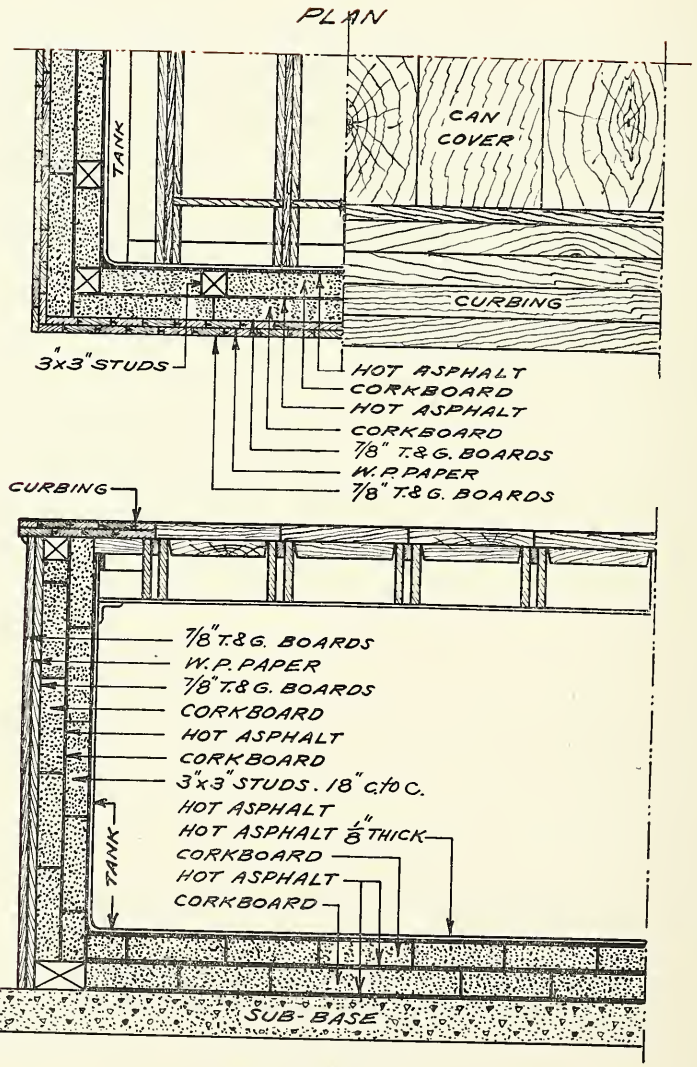
The bottom of the tank is to be insulated with ..... inches of ..... corkboard in two courses, laid on a reasonably smooth and even foundation. (Foundation to be furnished by Owner.) The first course is to be ..... inches thick laid in a heavy mop coat of hot asphalt. The second course is to be ..... inches thick laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than ⅛" thick thoroughly sealing all joints ready for the tank to be placed on top. This insulation is to be extended to the outside of the insulation on the sides of the tank.

SIDES:

The sides of the tank are to be insulated with ..... inches of granulated cork and one course of ..... inch ..... corkboard. 3" x 4" (or 3" x 6") studs are to be erected against the sides of the tank at 18" centers well secured to the top of the tank and to a 2" x 4" wood plate at bottom. The corkboard is to be erected against the studs securely fastened with special galvanized wire nails of proper length. The space between the corkboard and the tank is to be filled with granulated cork well packed in place. All corkboards are to be butted up close making tight fitting joints and all vertical joints are to be staggered. The exposed cork surface is to be finished with approximately ½" Portland cement plaster, applied in two coats, mixed one part Portland cement and two parts clean, sharp sand. The second coat is to be floated or trowelled to a smooth and even finish and scored off in squares of not over five feet. The top of the insulation all around the tank is to be protected by a curbing consisting of two courses of ⅞" T & G boards with two layers of waterproof insulation paper between laid on properly supported framing so that the top surface of curbing is flush with the ice can covers. The curbing is to extend from the outside of the insulation to the ice can covers.

NOTE.—*Wood finish according to Specification No. 43 may be substituted for the cement finish.*

See note page 53.


PLAN
TANK
CAN COVER
CURBING
3"x3" STUDS
HOT ASPHALT
CORKBOARD
HOT ASPHALT
CORKBOARD
7/8" T.& G. BOARDS
W. P. PAPER
7/8" T.& G. BOARDS
CURBING
7/8" T.& G. BOARDS
W.P. PAPER
7/8" T.& G. BOARDS
CORKBOARD
HOT ASPHALT
CORKBOARD
3"x3" STUDS. 18" C.to C.
HOT ASPHALT
HOT ASPHALT 1/8" THICK
CORKBOARD
HOT ASPHALT
CORKBOARD
TANK
SUB-BASE
ELEVATION

No. 43

FREEZING TANKS

On Wood Floor or Concrete Foundation

Two Courses of Corkboard under Bottom and Two Courses of Corkboard on Sides

Wood Finish

Four, Five, Six, Seven or Eight inches of STAR or CRESCENT Corkboard under bottom and on sides may be erected according to the following specification:

(See page 41 for recommendations of thicknesses.)

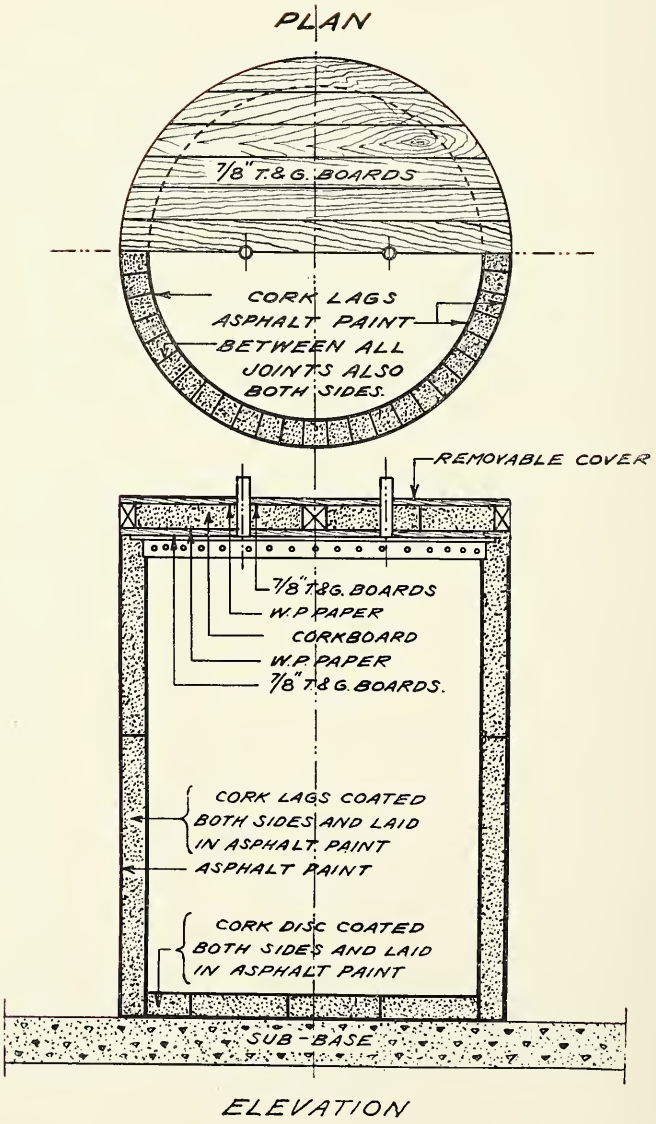
BOTTOM:

The bottom of the tank is to be insulated with ..... inches of ..... corkboard in two courses laid on a reasonably smooth and even foundation. (Foundation to be furnished by Owner.) The first course is to be ..... inches thick laid in a heavy mop coat of hot asphalt. The second course is to be ..... inches thick laid on the first course in a heavy mop coat of hot asphalt. All corkboards are to be butted up close making tight fitting joints. All transverse joints in the first course are to be broken and all joints in the second course are to be broken in both directions with the joints in the first course. The top surface of cork is to be mopped with a coat of hot asphalt not less than 1/8" thick thoroughly sealing all joints ready for the tank to be placed on top. This insulation is to be extended to the outside of the insulation on the sides of tank.

SIDES:

The sides of the tank are to be insulated with ..... inches of ..... corkboard in two courses. Studs (2" x 3", 3" x 3", 3" x 4") are to be erected against the tank 36" apart well secured to the top of the tank and to a wood plate at the bottom. The first course is to be ..... inches thick set between studs and applied against tank with hot asphalt and toenailed to studs. The second course is to be ..... inches thick applied against the first course with hot asphalt and nailed to studding. All corkboards are to be butted up close making tight fitting joints. All joints in the second course are to be broken in both directions with the joints of the first course and all vertical joints are to lap the studs by at least six inches. The insulation is to be finished with two courses of 7/8" T & G lumber erected vertically with two layers of waterproof paper between, lapping the paper not less than three inches. The wood finish is to be securely nailed to suitable wood furring strips placed along the top and bottom of tank.

NOTE.—*Cement finish according to Specification No. 42 may be substituted for the wood finish.*


PLAN
7/8" T. & G. BOARDS
CORK LAGS
ASPHALT PAINT
BETWEEN ALL
JOINTS ALSO
BOTH SIDES.
REMOVABLE COVER
7/8" T&G. BOARDS
W.P. PAPER
CORKBOARD
W.P. PAPER
7/8" T. & G. BOARDS.
CORK LAGS COATED
BOTH SIDES AND LAID
IN ASPHALT PAINT
ASPHALT PAINT
CORK DISC COATED
BOTH SIDES AND LAID
IN ASPHALT PAINT
SUB-BASE
ELEVATION

No. 44

CYLINDRICAL TANKS, COOLERS, FILTERS, Etc.

With Flat or Curved Tops

One Course of Corkboard

Asphalt Finish

Two, Three or Four inch CRESCENT Corkboard may be applied according to the following specification:

(See page 41 for recommendations of thicknesses.)

The ..... is to be insulated with one course of ..... inch CRESCENT Cork lagging bevelled to the proper radius to fit the cylindrical surface. The inside and outside surfaces of lags are to be asphalt coated. The lags are to be applied to the shell of the ..... and to each other with asphalt paint and securely fastened with wire every six inches. The entire insulated surface is to be finished with a heavy coat of asphalt paint applied evenly.

The bottom of the ..... is to be insulated with a disc of ..... inch CRESCENT Corkboard laid in asphalt paint. The top surface is to be finished with a coat of asphalt paint.

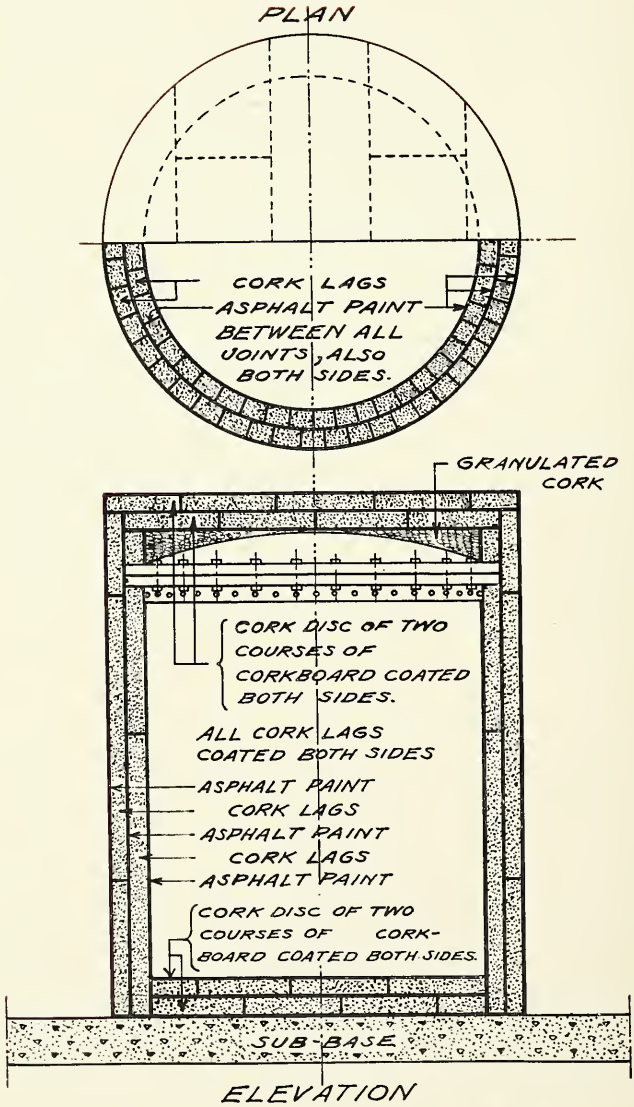
SPECIFICATION FOR FLAT TOP

The top of the ..... is to be insulated with a removable cover constructed in two halves of one course ..... inch CRESCENT Corkboard asphalt coated on all sides placed between two courses of 7/8" T & G lumber and two layers of waterproof paper.

SPECIFICATION FOR CURVED TOP

For tanks, coolers, etc., with heads as per drawing 45, use the above specification changing instructions for top insulation to read as follows:

The head of the ..... is to be insulated with a cork disc made of ..... inch CRESCENT Corkboard, lagging quality, asphalt coated both sides and cemented together with asphalt, breaking all transverse joints. The disc is to be cemented to the ends of cork lagging on the sides of the ..... with asphalt paint and the space between the ..... head and the disc is to be filled in with fine granulated cork. The entire insulated surface is to be finished with a heavy coat of asphalt paint applied evenly.


PLAN
CORK LAGS
ASPHALT PAINT
BETWEEN ALL
JOINTS, ALSO
BOTH SIDES.
GRANULATED
CORK
CORK DISC OF TWO
COURSES OF
CORKBOARD COATED
BOTH SIDES.
ALL CORK LAGS
COATED BOTH SIDES
ASPHALT PAINT
CORK LAGS
ASPHALT PAINT
CORK LAGS
ASPHALT PAINT
CORK DISC OF TWO
COURSES OF CORK-
BOARD COATED BOTH SIDES.
SUB-BASE
ELEVATION

No. 45

CYLINDRICAL COOLERS, BRINE TANKS, Etc.

Two Courses of Corkboard

Asphalt Finish

Four, Five, Six, Seven or Eight inches of CRESCENT Corkboard may be applied according to the following specification:

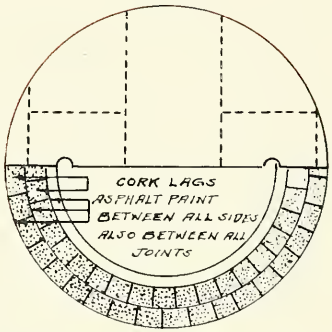
(See page 41 for recommendations of thicknesses.)

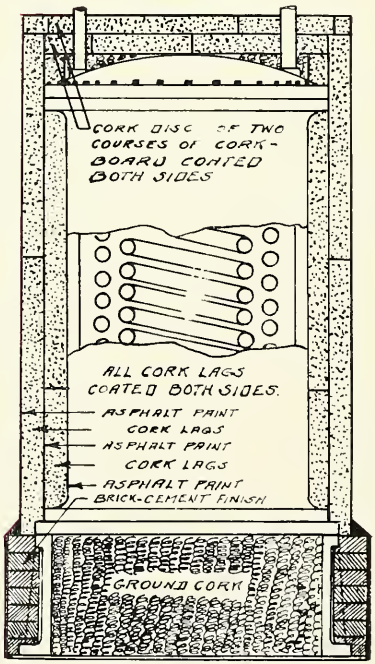
The ..... is to be insulated with two courses of ..... inch CRESCENT Cork lagging bevelled to the proper radius to fit the cylindrical surface. The inside and outside surfaces of lags are to be asphalt coated. The lags of the first course are to be applied to the shell of the ..... and to each other with asphalt paint and securely wired in place. The lags of the second course are to be applied against the first course and to each other with asphalt paint and securely fastened with wire every six inches. All joints in the second course are to be broken in both directions with the joints in the first course. The entire insulated surface is to be finished with a heavy coat of asphalt paint applied evenly.

The bottom of the ..... is to be insulated with a cork disc ..... inches thick made of two courses of ..... inch CRESCENT Corkboard, lagging quality, asphalt coated both sides and cemented together with asphalt. The joints of each course are to be broken in both directions with the joints of the other course. The disc is to be laid in hot asphalt and coated on all sides.

The head of the ..... is to be insulated with a cork disc ..... inches thick made of two courses of ..... inch CRESCENT Corkboard, lagging quality, asphalt coated both sides and cemented together with asphalt. The joints of each course are to be broken in both directions with the joints of the other course. The disc is to be cemented to the ends of cork lagging on the sides of the ..... with asphalt paint and the space between ..... head and disc is to be filled in with fine granulated cork. The entire insulated surface is to be finished with a heavy coat of asphalt paint applied evenly.

PLAN





ELEVATION

UNITED CORK COMPANIES

No. 46

CYLINDRICAL BRINE COOLERS

Two Courses of Corkboard

Asphalt Finish

Four, Five, Six, Seven or Eight inches of CRESCENT Corkboard may be applied according to the following specification:

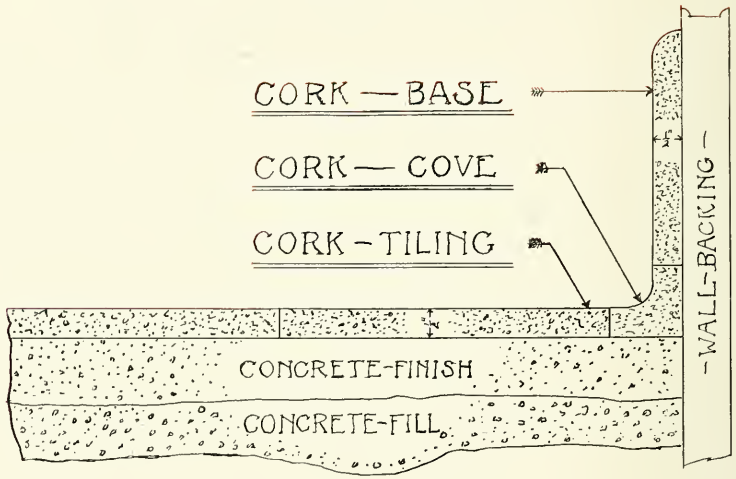
(See page 41 for recommendations of thicknesses.)

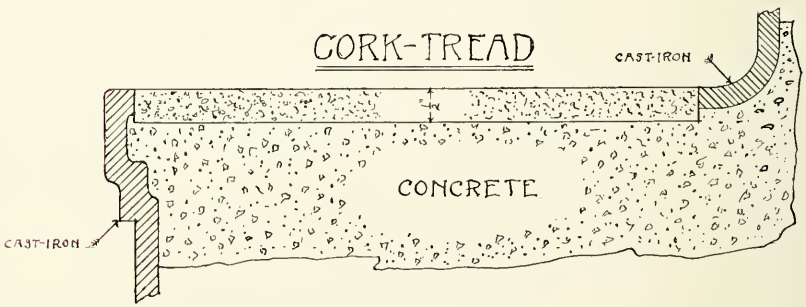
The cooler is to be insulated with two courses of ..... inch Crescent Cork lagging bevelled to the proper radius to fit the cylindrical surface. The inside and outside surfaces of lags are to be asphalt coated. The lags of the first course are to be applied to the shell of the cooler and to each other with asphalt paint and securely wired in place. The lags of the second course are to be applied against the first course and to each other with asphalt paint and securely fastened with wire every six inches. All joints in the second course are to be broken in both directions with the joints in the first course. The entire insulated surface is to be finished with a heavy coat of asphalt paint applied evenly.

The bottom of the cooler is to be insulated by erecting a single course of bricks in cement mortar from the floor or foundation to the under side of outer edge of the bottom flange of cooler and the entire space under cooler filled with fine granulated cork, well packed in place.

The exposed brick surface is to be finished with a coat of Portland cement plaster, mixed one part Portland cement and two parts clean, sharp sand.

The head of the cooler is to be insulated with a cork disc ..... inches thick made of two courses of ..... inch CRESCENT Corkboard, lagging quality, asphalt coated both sides and cemented together with asphalt. The joints of each course are to be broken in both directions with the joints of the other course. The disc is to be cemented to the ends of cork lagging on the sides of the cooler with asphalt paint and the space between cooler head and disc is to be filled in with fine granulated cork. The entire insulated surface is to be finished with a heavy coat of asphalt paint applied evenly.


CORK — BASE
CORK — COVE
CORK - TILING
CONCRETE-FINISH
CONCRETE-FILL
- WALL-BACKING -


CORK-TREAD
CAST-IRON
CONCRETE
CAST-IRON

No. 47

CRESCENT CORK TILE

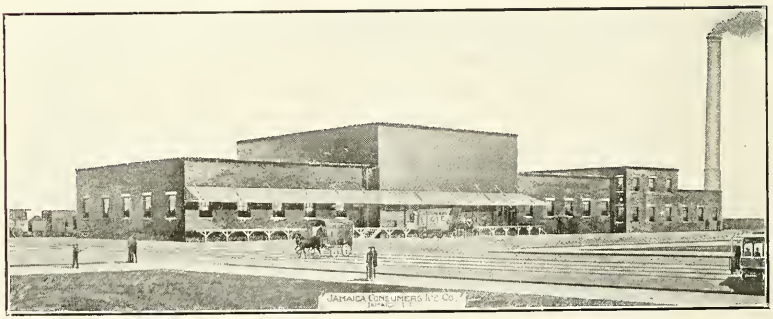
Standard Specification
United Cork Flooring Company

FLOORS: (or Stair Threads, etc., etc.) shall be of (CRESCENT) CORK TILE ½" thick of American manufacture, made of the finest quality of clear cork shavings in standard proportions by weight, compressed solidly in closed moulds and thoroughly baked. It shall be free from all foreign substances and cement of any kind, other than the natural gum of the cork. It shall be set in a waterproof cement, so applied to the tile and foundation as to achieve perfect adherence and hermetically seal and bind all joints.

All Cork Tile to be furnished under this specification shall be manufactured and installed by a contractor experienced in the art, having to his credit, installations which have given satisfactory service for a period of not less than three (3) years, prior to the taking of bids on this work. Bidders on this work, will name in their bid three (3) buildings in which their material has been in service for the period stipulated in these specifications.

NOTE.—If cove base is desired, state height required.

Plant of Northwestern Cold Storage and Warehouse Co. About six carloads of "Star" were used for the Insulation of this Building.



Plant of Jamaica Consumers Ice Co. More than 100,000 Feet of Crescent Corkboard were Used in Insulating this Plant

Shipping Data

PART IV

(Pages 145 to 150 inclusive)

CORKBOARD

SIZE OF BOARDS OR SHEETS

All corkboards, "Crescent" or "Star" or "Economy" are made in boards or sheets measuring

12″ x 36″

and in the following thicknesses:

Star or
"Economy" ½″, 1″, 1½″, 2″, 3″, 4″ and 6″
Crescent ¼″, ⅜″, ½″, ¾″, 1″, 1½″, 2″, 3″, 4″

AVERAGE WEIGHTS

	Wght. Per Cu. Ft. Lbs.	Wght. Per Ft. B/M Lbs.	Wght. Per Ft. B/M Crated Lbs.
Star and "Economy" Corkboard.....	16	1.35	1.5
Crescent Corkboard..	10	.85	1

MINIMUM CARLOAD WEIGHTS

On carload shipments freight rates for various sized cars are assessed upon certain minimum weights. These weights will have to be paid for whether or not the actual weights of shipments come up to these minimum requirements. According to rules in force January 1st, 1916, these minimum carload requirements are as follows:

For Corkboard Without Binder—Crescent

Size of Car	Official	Southern	Western	Trans Contin'l
36 foot..	20,000 lbs.	20,000 lbs.	20,000 lbs.	24,000 lbs.
40 foot..	22,400 "	20,000 "	22,400 "	24,000 "
45 foot..	28,400 "	20,000 "	25,400 "	24,000 "
50 foot..	32,000 "	20,000 "	28,400 "	24,000 "

For Corkboard With Binder—Star and Economy

Size of Car	Official	Southern	Western	Trans Contin'l
All sizes..	30,000 lbs.	30,000 lbs.	30,000 lbs.	24,000 lbs.

CONTENTS OF CARS

In the Official, Southern and Western classification territories about 25,000 square feet 1″ thick Crescent corkboard, or about 23,000 square feet 1″ thick Star corkboard make a minimum carload. For the Transcontinental territory about 30,000 square feet 1″ Crescent or 18,000 square feet 1″ Star are required.

The loading capacity of the various sized cars furnished by the railroads are as follows:

36 foot car.....24,000 to 26,000 ft. B/M
40 " " .....27,000 " 29,000 " "
45 " " .....30,000 " 32,000 " "
50 " " .....33,000 " 35,000 " "

LOADING AND PACKING

All-rail carload shipments (C. L.) are packed in bulk i.e., the loose sheets are stacked into the cars.

Less than carload shipments (L. C. L.) and all water shipments require crating. A charge of ½c. per sq. ft. 1″ thick is made for this service.

In handling, loading and packing, some of the boards become damaged. These are cut down to obtain straight edges and corners. We take the privilege of sending up to 5% of such shorter boards with each shipment.

FREIGHT RATES AND CLASSIFICATIONS

According to railroad rules of all classification territories in force January 1st, 1916, corkboard shipments take the following freight rates:

	With Binder Star Economy	Without Binder Crescent
Carloads	5th	4th
Less Carloads	3rd	2nd

FIBRE BOARD CASES OR BOXES

Used for Export Shipments

CONTENTS AND DIMENSIONS

Size of Corkboard	No. of boards per case	No. of sq. feet per case.	No. of sq. feet 1 inch thick per case.	Size of cases outside measurement.	No. of cubic feet per case gross.	Cubic feet space occupied by each sq. ft (1″ thick) of Corkboard packed.
1 ″	21	63	63	36½ x21½ x12¼	5.563	.089
1½″	14	42	63	36½ x21½ x12¼	5.563	.089
2 ″	10	30	60	36½ x20½ x12¼	5.305	.089
3 ″	7	21	63	36½ x21½ x12¼	5.563	.089
4 ″	5	15	60	36½ x20½ x12¼	5.305	.089

WEIGHT OF CRESCENT CORKBOARD				WEIGHT OF STAR CORKBOARD			
Gross weight per case packed, lbs.	Tare per case lbs.	Net weight per case lbs.	Weight per sq. ft. 1″ thick packed, lbs.	Gross weight per case packed, lbs.	Tare per case lbs.	Net weight per case lbs.	Weight per sq. ft. 1″ thick packed, lbs.
56	5½	50.5	.888	92.55	7½	85.05	1.470
56	5½	50.5	.888	92.55	7½	85.05	1.470
53	5	48.	.883	88.00	7	81.	1.467
56	5½	50.5	.888	92.55	7½	85.05	1.470
53	5	48.	.883	88.00	7	81.	1.467

GRANULATED NATURAL CORK, C. S. GRANULATED and REGRANULATED CORK

AVERAGE WEIGHTS

Material	Weight Per Cu. Ft. Lbs.	Weight Per Bag Lbs.	Of Bag Lbs.
5/8" Uncreened Gran.....	7	75	2
8/12 C. S. Gran.....	9	95	2
8/20 C. S. Gran.....	11	120	2
12/20 C. S. Gran.....	13	140	2
Mixed Regranulated	7½	80	2
Fine Regranulated	7½	80	2
Coarse Regranulated	6½	70	2

PACKING

All the above grades are packed in burlap bags measuring approximately 23" x 42" filled.

A charge for Burlap Bags is made on all shipments, but the bags may be returned to our factory prepaying all transportation charges. All bags received by us in good condition will be credited back to our customers at 5 cents less than charged. This is to take care of wear and tear.

FREIGHT RATES—CLASSIFICATION

All grades and kinds of granulated cork shipped to any point in the United States take the following freight rates:

Carloads	3rd Class
Less than Carloads.....	1st Class

MINIMUM CARLOAD WEIGHTS

On carload shipments freight rates for the various sized cars are assessed upon certain minimum weights. These weights will have to be paid for whether or not the actual weights of the shipments come up to the minimum requirements.

According to rules in force January 1st, 1917, the minimum carload requirements for all kinds of granulated cork are as follows:

	Official	Southern	Western	Trans Contin'l
36' car..	12,000 lbs.	12,000 lbs.	12,000 lbs.	24,000 lbs.
40' " ..	13,000 "	15,000 "	13,440 "	24,000 "
45' " ..	17,040 "	19,800 "	15,240 "	24,000 "
50' " ..	19,550 "	21,600 "	17,040 "	24,000 "

CORK BRICK

Cork bricks for horse stalls measure 4″ x 9″ x 1¼″.

Cork bricks for cow stalls measure 4″ x 9″ x 2″.

Weights, Packing, etc.

The average cork brick weighs about 2.5 lbs. each. If shipped in less than carload lots or by water they have to be crated, for which an extra charge of $5.00 per M is made.

Cork Brick for Horse Stalls

Size of Crates	Gross Weight Approx.	Net Weight Approx.	No. of Brick, per Crate
39½″ x 20″ x 13½″	300 lbs.	270 lbs.	112

Cork Brick for Cow Stalls

Size of Crates	Gross Weight Approx.	Net Weight Approx.	No. of Brick, per Crate
39½″ x 20″ x 13½″	280 lbs.	250 lbs.	100

FREIGHT CLASSIFICATION—MINIMUM CARLOADS

Cork brick are classified in all railroad classification territories as 4th class for l. c. l. shipments and 6th class for carload shipments, 40,000 pounds or about 16,000 bricks making a minimum carload.

CORK TILE

Cork tile weighs about 20 ounces per square foot ½″ thick. On account of the fine, sharp edges to which this material is finished all shipments are packed in strong wooden boxes to prevent damage.

Cork tile is classified for all railroad classifications territories the same as corkboard without foreign binder (CRESCENT) i. e., 2nd and 4th class.

Cork tile is made up in such a variety of sizes that no standards for packing can be given. A nominal charge is made to cover expenses of packing.

A Final Word

In a book of this character, it is manifestly impossible to cover a subject so broad as "Cork Insulation".

We have endeavored, therefore, to give the general and specific information that will assist toward a better understanding of the advantages of Cork as an Insulator.

We invite correspondence from anyone in search of further details and will promptly give our attention to all inquiries.

In our List of References, you will probably find names of firms or individuals in your own vicinity—who will be glad to tell you their experience with our Products.

Write for this list.

INDEX

PART I—GENERAL INFORMATION.

PART II—CONSTRUCTION DATA.

INDEX—Continued

Additional Data.

PART III—SPECIFICATIONS.

PART IV—SHIPPING DATA

Corkboard.

Cork Brick and Cork Tile.

Granulated and Re-Granulated Cork.